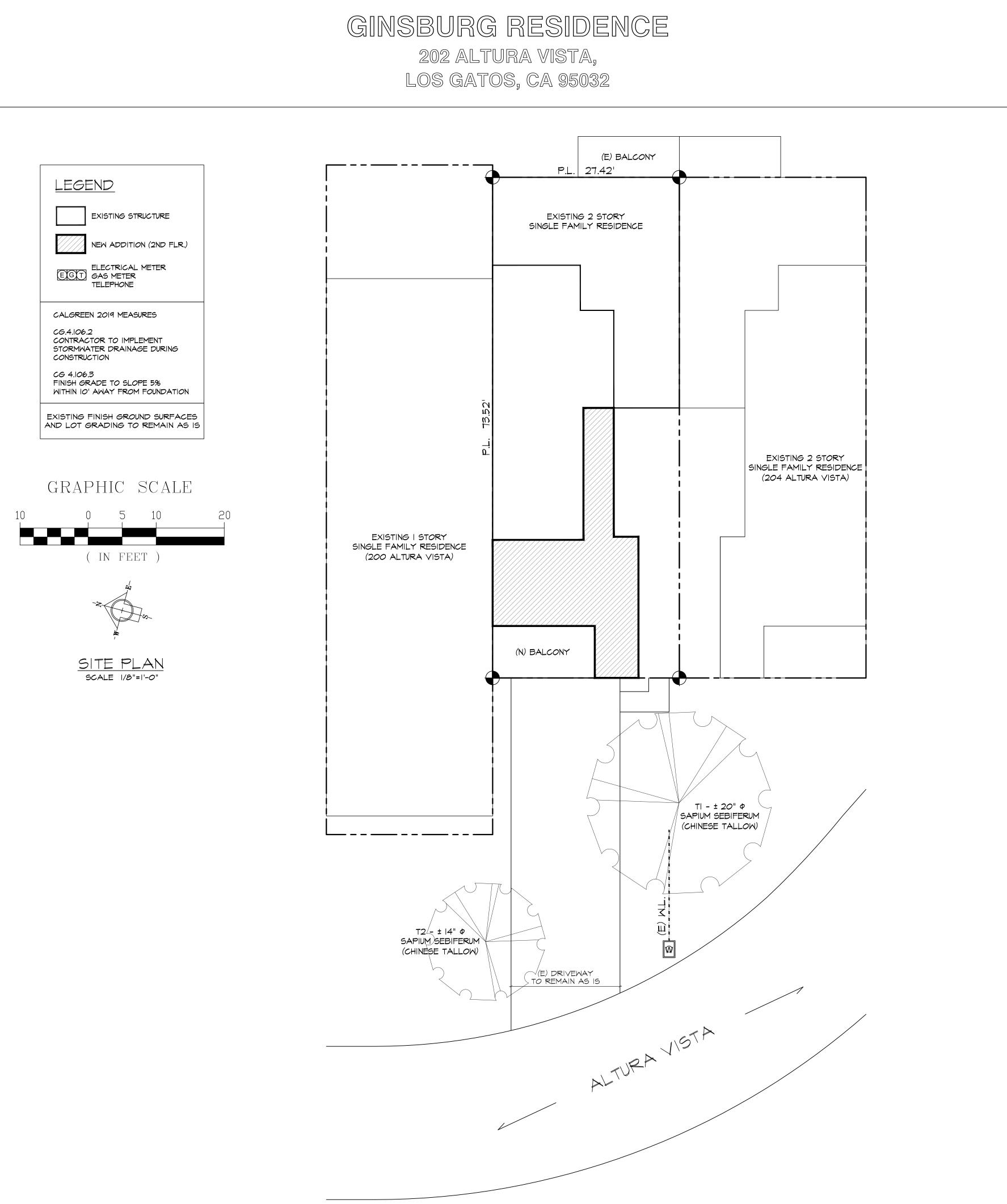
### **GENERAL NOTES PROJECT DATA** 1. ALL CONSTRUCTION WORK AND ITS FINISHED PRODUCT SHALL CONFORM TO A.P.N. NO 407-23-014 THE LATEST EDITION OF CODES ADOPTED BY LOCAL GOVERNING AGENCIES. ZONING PD OCCUPANCY GROUP R3-U THESE SHALL INCLUDE (BUT NOT LIMITED TO) THE APPLICABLE CODES, LAWS, AND REGULATIONS LISTED UNDER 'CODE INFORMATION' ON THIS SHEET, AS TYPE OF CONSTRUCTION V-B WELL AS ALL HEALTH AND SAFETY CODES AND ORDINANCES ADOPTED BY THE LOT AREA 1,969 S.F. LOCAL GOVERNING AGENCIES. . THE ISSUANCE OF A BUILDING PERMIT SHALL NOT NOT BE CONSTRUED AS A GUARANTEE THAT ALL CODE REQUIREMENTS ARE REFLECTED IN THE DOCUMENTS. NO GUARANTEE OF CONSTRUCTION QUALITY IS IMPLIED OR A. HABITABLE AREA: (E) 1st FLOOR AREA : 1,177 S.F. INTENDED BY THIS ARCHITECTURAL DOCUMENTS. THE GENERAL CONTRACTOR SHALL BE ULTIMATELY RESPONSIBLE FOR ALL CONSTRUCTION PROCESS. (E) 2nd FLOOR AREA 931 S.F. (N) 2nd FLOOR ADDITION 417 S.F. BUILDER SET DEFINITION: THESE PLANS ARE A "BUILDER SET", IT CONTAINS TOTAL AREA : 2,525 S.F. INFORMATION FOR BUILDING PERMIT AND GENERAL CONSTRUCTION PURPOSES ONLY. THEY ARE NOT EXHAUSTIVELY DETAILED NOR ARE FULLY SPECIFIED. THIS HAVE BEEN PRODUCED FOR THE USE OF A KNOWLEDGEABLE AND B. NON HABITABLE AREA: EXPERIENCED CONTRACTOR, IT IS THE RESPONSIBILITY OF THE CONTRACTOR (E) GARAGE 452 S.F. TO VERIFY, SELECT, SOLVE, AND INSTALL ALL MATERIALS & EQUIPMENT 114 S.F. (N) BALCONY 566 S.F. TOTAL AREA 4. BY EXECUTING CONTRACTS, PRIOR TO COMMENCING ANY WORK OR ORDERING ANY MATERIAL, CONTRACTOR REPRESENT THAT THEY HAVE: 4.1. VERIFIED EXISTING JOB SITE CONDITIONS AND SURROUNDINGS, LOCATIONS OF ALL UTILITY LINES, CONDUITS, SURFACE OR SUBSURFACE FIRE SPRINKLER NOT INSTALLED STRUCTURES, ETC. AND OF ANY NATURE THAT MAY BE AFFECTED BY THE WORK AND MADE DUE ALLOWANCES FOR DIFFICULTIES. 4.2. CONTRACTOR TO VERIFY ALL MEASUREMENTS SHOWN ON THESE DRAWINGS WHICH SUPERCEDES SCALE OF DRAWINGS. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT, ENGINEER OR OWNER OF ANY DISCREPANCIES THEY DISCOVER WITHIN THE DRAWINGS AND EXISTING FIELD CONDITION PRIOR TO CONTINUE THE WORK. IF CONTRACTOR CHOOSE TO CONTINUE WITHOUT ARCHITECT/ENGINEER CLARIFICATION/ INSTRUCTION, THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE . THE CONTRACTOR SHALL HOLD HARMLESS, INDEMNIFY AND DEFEND THE ARCHITECT AND HIS/HER CONSULTANTS FROM ANY ACTION INITIATED BY THE OWNER OR ANY SUBSEQUENT OWNERS FOR CONSTRUCTION DEFICIENCIES, MODIFICATIONS OR SUCH CONDITIONS WHICH MAY BE BEYOND THE CONTROL OF THE ARCHITECT AND ITS ASSOCIATES CONSULTANT. . CONTRACTOR SHALL ACCEPT AND MAINTAIN THE EXISTING SITE, SURROUNDING, CONDITION. AND PROTECT NEW AND EXISTING WORK, EQUIPMENT, MATERIALS. DAMAGES CAUSED BY CONTRACTOR NEGLECTNESS, SHALL BE REPAIRED, REPLACE AS GOOD CONDITON AS BEFORE, AT THE EXPENSE OF THE CONTRACTOR. . THE ARCHITECT SHALL NOT BE OBSERVING THE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR SAFETY, SECURITY, QIALITY CONTROL AND CONSTRUCTION STANDARDS FOR THIS PROJECT. . DEMOLITION SHALL BE DONE IN A SAFE, ORDERLY MANNER WITHOUT **SCOPE OF WORK:** DAMAGING TO OTHER PARTS OF THE PREMISES OR ADJACENT PROPERTIES. ALL DEMOLISHED/REMOVED ITEMS SHALL BE DISPOSED OFF BY THE NEW ADDITION OF 417 S.F. TO THE EXISTING 2 STORY TOWN HOUSE. ADD CONTRACTOR PER CITY/ COUNTY CONSTRUCTION & DEMOLITION WASTE NEW BEDROOM. TOTAL WILL BE 3 BEDROOMS AFTER THE ADDITION. MANAGEMENT ORDINANCE, AND VERIFY WITH THE OWNER ON ITEMS TO BE • RECONFIGURE & REMODEL M. BATHROOM & WIC AREA. SAVED AND STORED. ALL REMOVED ITEMS TO BE SAVED FOR REUSE SHALL BE • LIKE FOR LIKE BATHROOMS REMODEL. HANDLED WITH CARE. **SHEET INDEX APPLIED CODES** 2019 CALIFORNIA BUILDING CODE COVER SHEET, SITE PLAN + NOTES BEST MANAGEMENT PRACTICES 2019 CALIFORNIA RESIDENTIAL CODE (CRC) 2019 CALIFORNIA ELECTRICAL CODE 2019 CALGREEN CHECKLIST 2019 CALIFORNIA MECHANICAL CODE 2019 CALGREEN CHECKLIST 2019 CALIFORNIA PLUMBING CODE EXISTING 1st FLOOR PLAN 2019 CALIFORNIA ENERGY CODE EXISTING + PROPOSED 2nd FLOOR PLANS 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE EXISTING + PROPOSED ROOF PLANS 2019 CALIFORNIA FIRE CODE **ELEVATIONS + SECTION ELEVATIONS** TOWN OF LOS GATOS MUNICIPAL CODE **ELEVATIONS** RCP + ME PLAN ARCHITECTURAL STANDARD DETAILS TITLE 24 REPORTS TITLE 24 REPORTS FOUNDATION PLAN FRAMING PLANS ALL CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO THE STRUCTURAL DETAILS STRUCTURAL DETAILS MON - FRI : 7.00 AM - 5.30 PM STRUCTURAL DETAILS 9.00 AM - 3.00 PM SUNDAYS & HOLIDAYS: NO CONSTRUCTION ACTIVITIES ALLOWED ALL CONTRACTORS, SUBCONTRACTORS, AND VENDORS SHALL BE LICENSED TO DO BUSINESS IN THE TOWN OF LOS GATOS **VICINITY MAP PROJECT TEAM** ALEXANDER ANGKAWIJAYA 408-431-2952 AA.HOMEDESIGNBUILD@GMAIL.COM STRUCTURE ENGINEER: DAN L. CHEN S.E. 47849 MASTERS CT, FREMONT CA 94539 510-579-8230 TITLE 24/ MECHANICAL DESIGN: CARSTAIRS ENERGY P.O. BOX 4736 SAN LUIS OBISPO, CA 93403 805-904-9048 TITLE24@YAHOO.COM

ANY ALTERATIONS, ADDITIONS OR IMPROVEMENT SHALL REQUIRE ALL

NON-COMPLIANT PLUMBING FIXTURES TO BE REPLACED WITH WATER-CONSERVING PLUMBING FIXTURES. NON-COMPLIANT FIXTURES SHALL BE REPLACED PRIOR TO FINAL PERMIT APPROVAL OR ISSUANCE OF CERTIFICATE OF OCCUPANCY BY THE CITY (SB 407)



Shai & Ilil

owner

TOWN HOUSE

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ADDITION & REMODEL

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> DESIGN SERVICES

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COVER
SHEET,
SITE PLAN +
NOTES

DATE 05.05.21

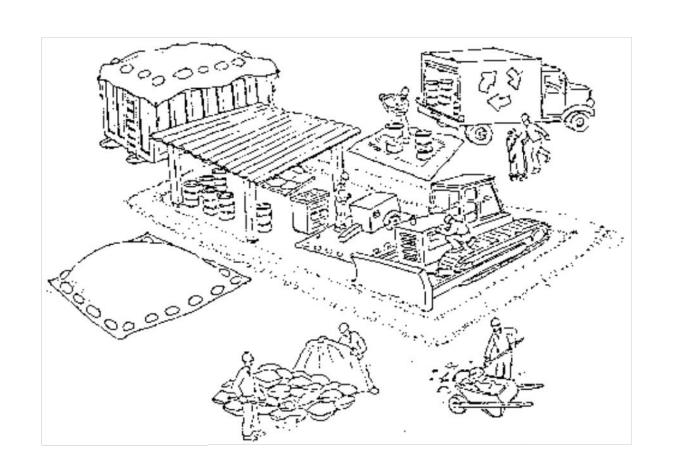
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SCALE AS SHOWN

A-1

# Pollution Prevention — It's Part of the Plan



# Make sure your crews and subs do the job right!

Runoff from streets and other paved areas is a major source of pollution in San Francisco Bay. Construction activities can directly affect the health of the Bay unless contractors and crews plan ahead to keep dirt, debris, and other construction waste away from storm drains and local creeks. Following these guidelines will ensure your compliance with local ordinance requirements.



# Materials storage & spill cleanup

# Non-hazardous materials management

- ✓ Sand, dirt, and similar materials must be stored at least 10 feet from catch basins, and covered with a tarp during wet weather or when rain is forecast.
- ✓ Use (but don't overuse) reclaimed water for dust control as needed.
- ✓ Sweep streets and other paved areas daily. Do not wash down streets or work areas with water!
- ✔ Recycle all asphalt, concrete, and aggregate base material from demolition activities.
- ✓ Check dumpsters regularly for leaks and to make sure they don't overflow. Repair or replace leaking dumpsters promptly.

# Hazardous materials management

- ✓ Label all hazardous materials and hazardous wastes (such as pesticides, paints, thinners, solvents, fuel, oil, and antifreeze) in accordance with city, state, and federal regulations.
- ✓ Store hazardous materials and wastes in secondary containment and cover them during wet weather.
- ✓ Follow manufacturer's application instructions for hazardous materials and be careful not to use more than necessary. Do not apply chemicals outdoors when rain is forecast within 24 hours.
- ✔ Be sure to arrange for appropriate disposal of all hazardous wastes.

# Spill prevention and control

- ✓ Keep a stockpile of spill cleanup materials (rags, absorbents, etc.) available at the construction site at all times.
- ✓ When spills or leaks occur, contain them immediately and be particularly careful to prevent leaks and spills from reaching the gutter, street, or storm drain. Never wash spilled material into a gutter, street, storm drain, or creek!
- ✓ Report any hazardous materials spills immediately! Dial 911 or your local emergency response number.

# Vehicle and equipment maintenance & cleaning

- ✓ Inspect vehicles and equipment for leaks frequently. Use drip pans to catch leaks until repairs are made; repair leaks promptly.
- ✓ Fuel and maintain vehicles on site only in a bermed area or over a drip pan that is big enough to prevent runoff.
- ✓ If you must clean vehicles or equipment on site, clean with water only in a bermed area that will not allow rinsewater to run into gutters, streets, storm drains, or creeks.
- Do not clean vehicles or equipment on-site using soaps, solvents, degreasers, steam cleaning equipment, etc.



# Earthwork & contaminated soils

- ✓ Keep excavated soil on the site where it is least likely to collect in the street. Transfer to dump trucks should take place on the site, not in the street.
- Use hay bales, silt fences, or other control measures to minimize the flow of silt off the site.



- ✓ Avoid scheduling earth moving activities during the rainy season if possible. If grading activities during wet weather are allowed in your permit, be sure to implement all control measures necessary to prevent erosion.
- Mature vegetation is the best form of erosion control. Minimize disturbance to existing vegetation whenever possible.
- ✓ If you disturb a slope during construction, prevent erosion by securing the soil with erosion control fabric, or seed with fast-growing grasses as soon as possible. Place hay bales down-slope until soil is secure.
- ✓ If you suspect contamination (from site history, discoloration, odor, texture, abandoned underground tanks or pipes, or buried debris), call your local fire department for help in determining what testing should be done.
- ✓ Manage disposal of contaminated soil according to Fire Department instructions.

# Dewatering operations

- Reuse water for dust control, irrigation, or another on-site purpose to the greatest extent possible.
- ✓ Be sure to call your city's storm drain inspector before discharging water to a street, gutter, or storm drain. Filtration or diversion through a basin, tank, or sediment trap may be required.
- ✓ In areas of known contamination, testing is required prior to reuse or discharge of groundwater. Consult with the city inspector to determine what testing to do and to interpret results. Contaminated groundwater must be treated or hauled off-site for proper disposal.

# Saw cutting

- ✓ Always completely cover or barricade storm drain inlets when saw cutting. Use filter fabric, hay bales, sand bags, or fine gravel dams to keep slurry out of the storm drain system.
- ✓ Shovel, absorb, or vacuum saw-cut slurry and pick up all waste as soon as you are finished in one location or at the end of each work day (whichever is sooner!).
- ✓ If saw cut slurry enters a catch basin, clean it up immediately.

# Paving/asphalt work



- ✓ Do not pave during wet weather or when rain is forecast.
- Always cover storm drain inlets and manholes when paving or applying seal coat, tack coat, slurry seal, or fog seal.
- ✔ Place drip pans or absorbent material under paving equipment when not in use.
- Protect gutters, ditches, and drainage courses with hay bales, sand bags, or earthen berms.
- ✓ Do not sweep or wash down excess sand from sand sealing into gutters, storm drains, or creeks. Collect sand and return it to the stockpile, or dispose of it as trash.
- ✓ Do not use water to wash down fresh asphalt concrete pavement.

# Concrete, grout, and mortar storage & waste disposal

- ✔ Be sure to store concrete, grout, and mortar under cover and away from drainage areas. These materials must never reach a storm drain.
- ✓ Wash out concrete equipment/trucks off-site or designate an on-site area for washing where water will flow onto dirt or into a temporary pit in a dirt area. Let the water seep into the soil and dispose of hardened concrete with trash.



- ✓ Divert water from washing exposed aggregate concrete to a dirt area where it will not run into a gutter, street, or storm drain.
- If a suitable dirt area is not available, collect the wash water and remove it for appropriate disposal off site.

# TOWN HOUSE

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ADDITION & REMODEL

AA HOME DESIGN & BUILD LLC

DESIGN SERVICES

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BEST MANAGEMENT PRACTICES

SHEET TITLE

DATE 05.05.21

DRAWN AA

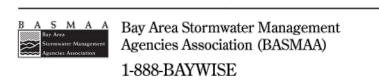
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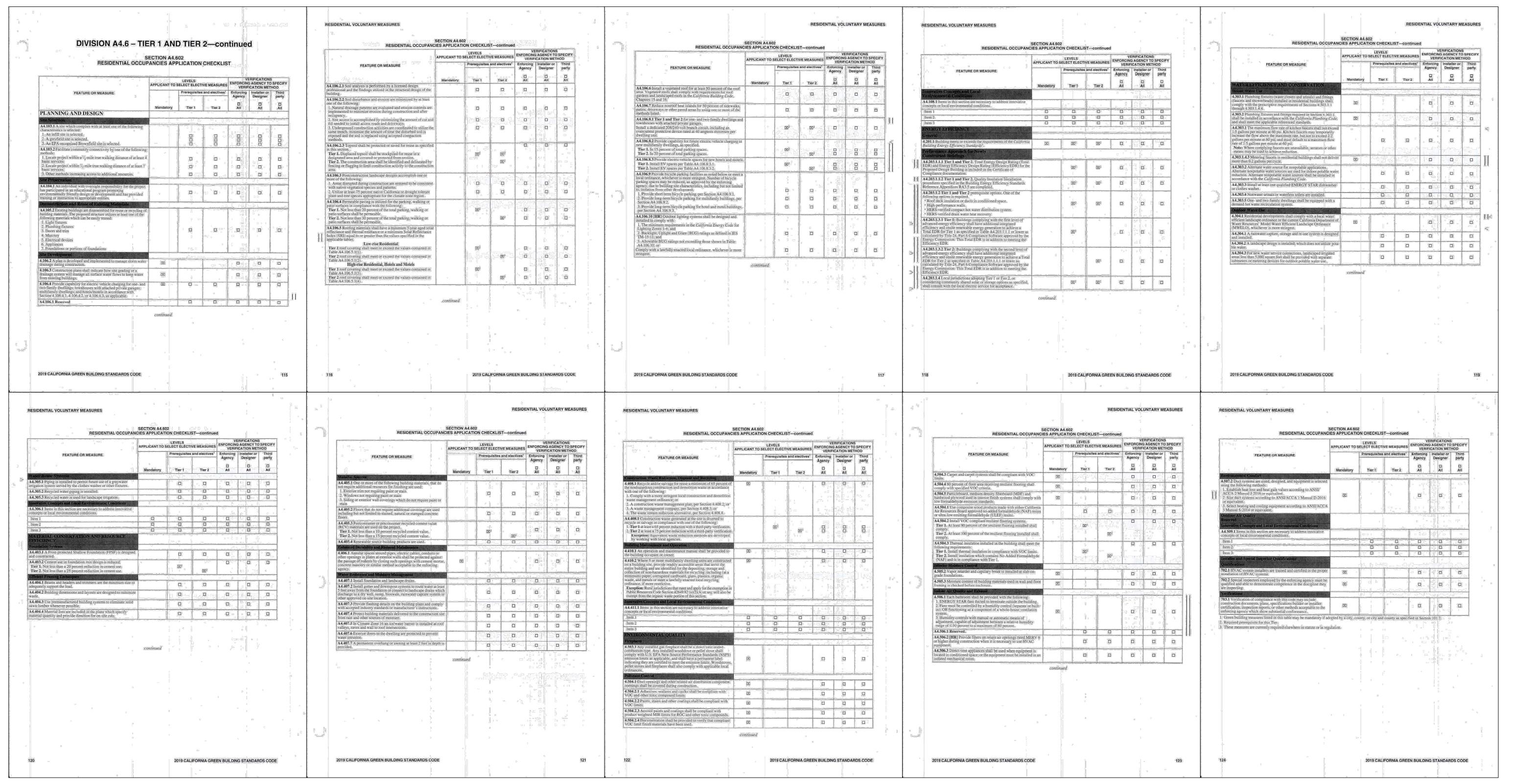
**1-1**OF 13 SHEETS

# Painting

- Never rinse paint brushes or materials in a gutter or street!
- Paint out excess water-based paint before rinsing brushes, rollers, or containers in a sink. If you can't use a sink, direct wash water to a dirt area and spade it in.
- ✔ Paint out excess oil-based paint before cleaning brushes in thinner.
- ✓ Filter paint thinners and solvents for reuse whenever possible. Dispose of oil-based paint sludge and unusable thinner as hazardous waste.



Storm drain polluters may be liable for fines of up to \$10,000 per day!



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> 2019 CALGREEN CHECKLIST

SHEET TITLE

DATE 05.05.21

DRAWN AA

SCALE AS SHOWN

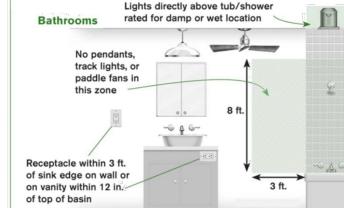
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BATHROOMS

### Bath Electrical:

- All installed lighting shall be high efficacy. [CNC 150.0(k)1A] (<u>new in 2016 codes</u>)
- At least one light shall be controlled by a vacancy sensor (a manual-on, automatic-off occupancy sensor). [CNC 150.0(k)2AJ (<u>new in 2016 codes</u>)
- Exhaust fans must be switched separate from lighting, with the exception that lighting integral to an exhaust fan can be on the same switch if the fan is controlled by a humidistat that continues its operation after the light is off.
- All receptacle outlets in bathrooms shall be GFCI protected [CEC 210.8A1].
- All receptacle outlets in bathrooms shall be tamper resistant [CEC 406.12A].
- When a bathtub or shower stall is in an area not technically considered a bathroom (by the
  definitions in the electrical code), receptacles within 6 ft. of the tub/shower stall must be GFCIprotected. [CEC210.8A9]. (new in 2016 codes)
- A receptacle outlet is required within 3 feet of each wash basin location. It may be on the wall, or an adjacent partition, or on the face or side of the cabinet not more than 12 inches below the top of the basin [CEC 210.52D]. (Change in 2016 codes previous code measured the 12 inches from the top of the vanity. Basins such as that in the figure below are sometimes well above the top of the vanity).
- Receptacles cannot be face-up in a vanity surface; listed pop-up receptacles are allowed [CEC 406.5E & 210.52D].
- A minimum of one 20-amp circuit is required for the receptacles in the bathroom(s). This circuit can have no other outlets, including lights [CEC 210.11C3]. If a 20-amp circuit serves only one (1) bathroom, lights and fans can be on the same circuit with the receptacles in that bathroom [CEC 210.11C3 exception].
- Hydro-massage tubs require an individual (dedicated) branch circuit and readily accessible GFCI protection [CEC 680.71]. An access door is required and must be large enough to remove the motor and pump. Cord-connected equipment must have the receptacle facing the opening and be no more than one foot behind the access hatch [CEC 680.73].





- Recessed light fixtures in shower enclosures must be listed for a damp or wet location [CEC 410.10A]
- Pendant light fixtures, track lights, and paddle fans shall not be installed lower than 8 feet above the flood-level rim of a tub, including the area 3 feet past the edge of the tub [CEC 410.10D].
- Electrical panels shall not be installed in bathrooms [CEC 240.24E].
- Switches and receptacles are not allowed in bathtub or shower spaces [CEC 404.4C & 406.9C].

# **BATHROOMS** (Continued)

# Bathroom Plumbing, General:

- All piping ¾ inch or more in diameter and all hot water pipes associated with a recirculation system must be insulated with min. 1-inch thick insulation. Existing inaccessible piping does not require insulation [CNC 150.0(j)2].
- Newly installed plumbing fixtures shall be water-conserving in compliance with the California Plumbing Code and Green Building Standards. Water closets shall not exceed 1.28 gallons per flush, showerheads shall not exceed 2.0 GPM and new lavatory faucets shall not exceed 1.2 GPM at 60 PSI. [CPC 407.2, 408.2 & 411.2] All Existing plumbing fixtures not included in the scope of new work shall be replaced if necessary to comply with SB407 Plumbing Fixtures Replacement requirements – See Water Conservation Certification Form.

# Bathroom Plumbing, Toilets & Bidets:

- Toilets and bidets require a minimum 15 inches of clearance from the center line of the bowl to each side, and 24 inches of clearance from the front edge of the bowl [CPC 402.5]. The maximum flow rate is 1.28 GPF [CPC 403.2.1].
- Lavatory sinks require a minimum of 24 inches front clearance [CPC 402.5] (<u>new in 2016 code</u>)
- Showers require a minimum 2 inch drain and trap [CPC Table 702.1].
- All shower compartments shall have a minimum finished interior of 1024 square inches and shall be capable of encompassing a 30 inch diameter circle [CPC 408.6]. The curb may encroach on these size requirements. All surfaces shall be waterproof up to 72 inches above the drain inlet [CRC R307.2]. Thresholds shall be of sufficient width to accommodate a minimum 22 inch clear egress opening from the shower [CPC 408.5].
- Safety glass (tempered or laminated) is required for all glass shower doors and partitions and for windows in walls facing the tub or shower and located less than 60 inches above the standing surface of the tub/shower and within 60 inches horizontally [CRC R308.4.1&5].
- The maximum water temperature to a shower or tub/shower combination is 120°F. The water heater thermostat cannot be used as the control for this temperature. Valves shall provide scald and thermal shock protection, and be pressure-balanced, thermostatic, or combination pressure-balanced/thermostatic mixing in accordance with ASSE 1016 or ASME A112.18.1/CSA B125.1. [CPC 408.3].

# Mechanical:

- Mechanical ventilation is required in all bathrooms with tubs or showers. The fan must move a
  minimum 50 CFM of air and be separately switched from the lighting. Fans that operate
  continuously can be 20 CFM. The duct must terminate on the exterior not less than 3 feet from
  openings into the building [CMC 502.2.1].
- Baths with no tub or shower (half baths) do not require mechanical ventilation if they are provided with a window at least 3 sq. ft. half of which is openable [CRC R303.3].

# Tile & Backing:

Water-resistant gypsum board (purple board) can be used as a tile backer board in areas that
are not subject to direct exposure to water or high humidity [CRC R702.3.7.1]. Examples would
be a wall behind a toilet or above a vanity countertop. Purple board cannot be used in a shower
for direct application of tile. It can be used in showers behind a water-resistive membrane with
mortar bed and lath. Other acceptable materials for application of tile in showers include cement
board, fiber-cement or glass mat gypsum backers [CRC R702.4.2].

TOWN HOUSE

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EXISTING 1st FLOOR PLAN

REVISION

1
2

SHEET TITLE

AS SHOWN

DATE 05.05.21

DRAWN AA

SCALE SHEET

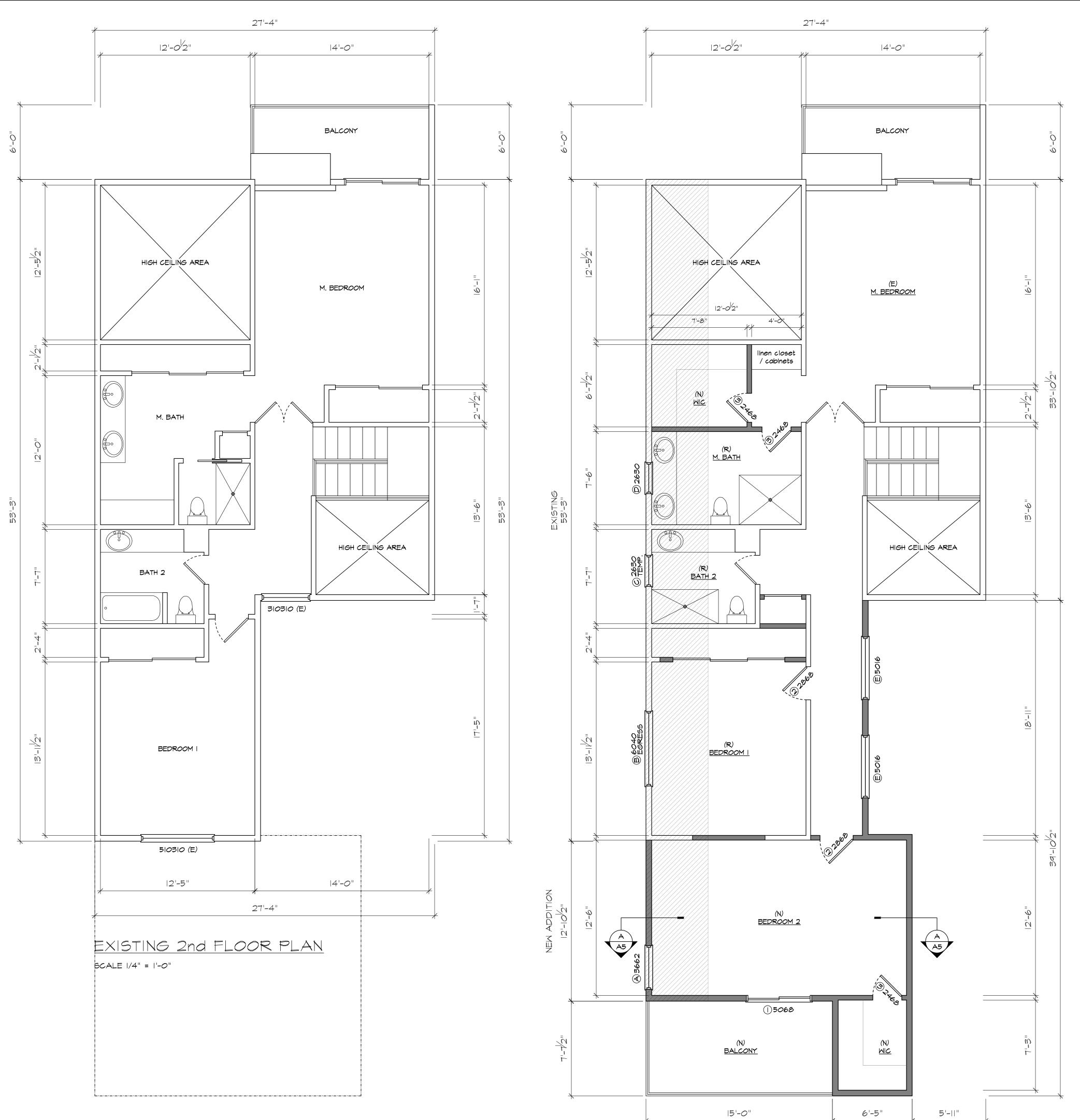


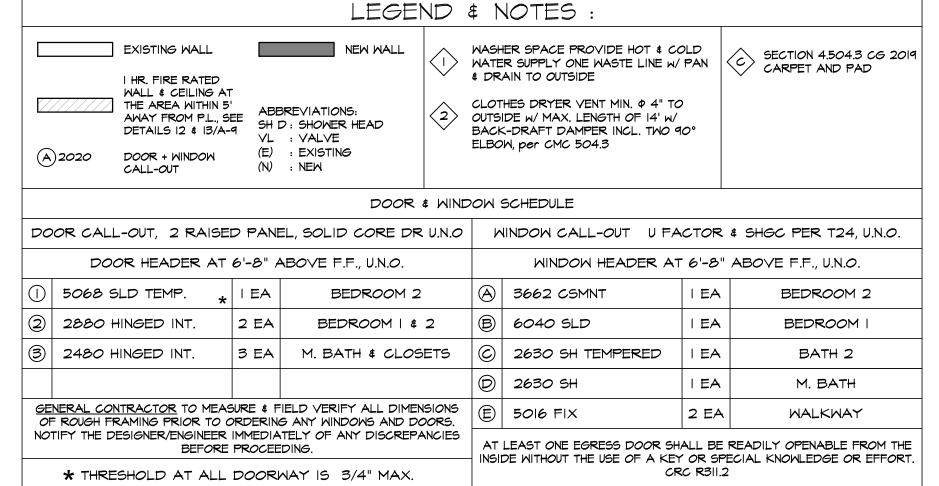
EXISTING 1st FLOOR PLAN (NO CHANGE)

SCALE 1/4" = 1'-0"

5'-11"

21'-5"





CAL GREEN 2019 MANDATORY MEASURES :

4.303.I INDOOR WATER USE SHALL BE REDUCED BY AT LEAST 20 PERCENT USING WATER SAVING FIXTURES OR FLOW

- 4.303.2 WHEN USING CALCULATION METHOD SPECIFIED IN SECTION 4.303.1, MULTIPLE SHOWER HEADS SHALL COMPLY WITH SPECIFIED PERFORMANCE REQUIREMENT
- 4.303.3 PLUMBING FIXTURES (WATER CLOSETS AND URINALS) AND FITTINGS (FAUCETS AND SHOWERHEADS) SHALL COMPLY WITH
- SPECIFIED PERFORMANCE REQUIREMENTS. 4.505.3 MOISTURE CONTENT OF BUILDING MATERIALS USED IN WALL AND FLOOR FRAMING IS CHECKED BEFORE ENCLOSURE. CITY
- WILL VERIFY MOISTURE CONTENT, MAX 19%. 4.406.1 JOINTS AND OPENINGS. ANNULAR SPACES AROUND PIPES, ELECTRIC, CABLES, CONDUITS OR OTHER OPENINGS IN PLATES AT EXTERIOR WALLS SHALL BE PROTECTED AGAINST THE PASSAGE OF RODENTS BY CLOSING SUCH OPENINGS WITH

CEMENT MORTAR, CONCRETE MASONRY OR SIMILAR METHOD ACCEPTABLE TO THE ENFORCING AGENCY

### PLAN NOTES

- . ALL BEDROOM WINDOWS SHALL HAVE A MAXIMUM SILL HEIGHT OF 44" ABOVE FINISH FLOOR
- 2. ALL WINDOWS AND DOORS GLASS SHALL BE DOUBLE GLAZED
- 3. I HOUR FIRE RATED ASSEMBLY SHALL BE PROVIDED ALONG WALL/CEILING BETWEEN GARAGE AND HABITABLE
- 4. SHOWER & SHOWER TUB UNITS TO BE PROVIDED WITH INDIVIDUAL CONTROL VALVES OF THE PRESSURE BALANCE OR THE THERMOSTATIC MIXING VALVE TYPE. PROVIDE I.8 GAL/MIN SHOWER HEADS AND I.2 GAL/MIN FAUCETS 5. ALL SHOWER ENCLOSURE & DOOR SHALL BE TEMPERED GLASS. DOOR OPENING SHALL HAVE A MIN 22" NET OPENING AND TO SWING OUT.
- 6. FIBERGLASS TUB SHOWER WALLS SHALL BE INSTALLED OVER A MOISTURE RESISTANT UNDERLAYMENT TO A
- HEIGHT OF 72 INCHES ABOVE THE DRAIN INLET 7. SAFETY GLAZING IS REQUIRED ON WINDOWS WITHIN TUB OR SHOWER AREA WHEN THE BOTTOM EDGE OF THE
- GLAZING IS LESS THAN 60" ABOVE A STANDING SURFACE AND DRAIN INLET (CBC 2406.4) 8. SHOWER COMPARTMENT MUST HAVE A FINISHED INTERIOR NO LESS THAN 1024 SQUARE INCHES AND CAPABLE OF
- ENCOMPASSING A 30 INCHES CIRCLE (CPC 411.7) 9. PROVIDE 'DUROCK' OR WONDERBOARD FROM FLOOR TO CEILING ON ALL SHOWER AND TUB AREAS. NO GYPSUM
- PRODUCTS BEHIND TILE ASSEMBLIES IN WET ENVIRONMENTS PER CRC R702.3.8.1. IO. ALL PLUMBING FIXTURES FOR BATHROOMS AND KITCHEN SHALL BE I.A.P.M.O. APPROVED.
- II. ALL WATER CLOSETS SHALL BE ULTRA FLUSH TOILET. TANKS SHALL HAVE A MAXIMUM CAPACITY OF 1.28 GALLON PER FLUSH (ASSEMBLY BILL #2355)
- 12. TOILET CLEARANCE MIN 24" IN FRONT OF TOILET AND 15" MINIMUM CENTER OF TOILET TO EACH SIDE (CBC 2904)
- 13. SOLDER USED IN POTABLE PIPING SHALL NOT CONTAIN MORE THAN 2/10 % LEAD. 14. HOSE BIBS AND FAUCETS SHALL BE EQUIPPED WITH NON REMOVABLE BACKFLOW PREVENTION DEVICE.
- 15. PROVIDE 18" PLATFORM FOR WATER HEATER AND FURNACE LOCATED IN THE GARAGE. WATER HEATER SHALL BE SECURED IN PLACE WITH 2 SEISMIC STRAPS. STRAPS SHALL BE ANCHORED AT POINTS WITHIN THE UPPER AND
- LOWER ONE-THIRD OF ITS VERTICAL DIMENSION. THE LOWER ANCHOR STRAP LOCATED TO MAINTAIN A MINIMUM DISTANCE OF 4" ABOVE CONTROLS. 16. PROVIDE WATER HEATER PRESSURE AND TEMPERATURE RELIEF VALVE TERMINATION TO OUTSIDE OF BUILDING
- (CPC 608.5) 17. NO GAS WATER HEATER OR GAS FURNACE SHALL BE INSTALLED IN BEDROOM, BATHROOM, OR CLOTHES CLOSET
- (CPC 504.1) 18. PROVIDE CLOTHES DRYER VENT TO OUTSIDE WITH A MAX. LENGTH OF 14' EQUIPPED WITH A BACK-DRAFT
- DAMPER INCLUDING TWO 90E ELBOWS AND A MINIMUM DIAMETER OF 4" (CMC 504.3)
- 19. SKYLIGHTS OPENABLE SKYLIGHTS NEED TO BE 10 FT FROM PLUMBING VENTS OR 3 FT BELOW THE VENT TERMINATION
- 20. VENTILATION REQUIRED IN THE BATHROOM AND LAUNDRY ROOM. PROVIDE OPENABLE WINDOW AREA W/ 5% OF FLOOR AREA (1.5 SF MIN) OR MECHANICAL VENTILATION (5 AIR CHANGES PER HOUR). THE POINT OF DISCHARGE OF EX.AIR SHALL BE AT LEAST 3FT FROM ANY OPENING INTO THE BUILDING. THE EXHAUST FAN SHALL BE EQUIPPED BACKDRAFT DAMPER TO COMPLY W/ ENERGY REGULATIONS
- 21. A SECURITY AUTOMATIC SHUT OFF VALVE SHALL BE INSTALLED BETWEEN THE GAS METER AND THE DWELLING
- 22.A 304 VERTICAL CLEARANCE IS REQUIRED FROM THE TOP OF A COOKING APPLIANCE TO COMBUSTIBLE MATERIALS OR METAL CABINETS. THE MINIMUM HORIZONTAL OR SIDE CLEARANCES SHALL BE SPECIFIED BY A
- PERMANENT MARKING ON THE COOKING APPLIANCE
- 23. RESIDENTIAL BUILDINGS UNDERGOING PERMITTED ALTERATIONS, ADDITIONS OR IMPROVEMENTS SHALL REPLACE NONCOMPLIANT PLUMBING FIXTURES WITH WATER-CONSERVING PLUMBING FIXTURES. PLUMBING FIXTURE REPLACEMENT IS REQUIRED PRIOR TO ISSUANCE OF CERTIFICATE OF FINAL COMPLETION, CERTIFICATE OF OCCUPANCY OR FINAL PERMIT APPROVAL.

# Table 4.303.2 Fixture Flow Rates Mandatory Compliance

	J
FIXTURE TYPE	MAX FLOW RATE @ >20% REDUCTION FR. BASELINE
SHOWERHEADS	1.8 GPM @80 PSI
LAVATORY FAUCHETS, RESIDENTIAL	1.2 GPM @60 PSI
KITCHEN FAUCHETS	1.5 GPM @60 PSI
GRAVITY TANK-TYPE WC	1.28 GAL/ FLUSH
URINALS	0.5 GAL/ FLUSH

SCALE 1/4" = 1'-0"

- CIVIL CODE SECTION IIOI PLUMBING REQUIREMENTS FOR HOMES CONSTRUCTED PRIOR TO JANUARY 1, 1994:
- PRIOR TO FINAL INSPECTION IT IS THE APPLICANT'S RESPONSIBILITY TO REPLACE ALL NON-CONFORMING PLUMBING FIXTURES WATER CONSERVING PLUMBING FIXTURES. NON-COMPLIANT PLUMBING FIXTURES MEAN ANY OF THE FOLLOWING:
- ANY TOILET MANUFACTURED TO USE MORE THAN 1.6 GALLONS OF WATER PER FLUSH.
- ANY SHOWERHEAD MANUFACTURED TO HAVE A FLOW CAPACITY OF MORE THAN 2.05 GALLONS OF WATER
- ANY INTERIOR FAUCET THAT EMITS MORE THAN 2.2 GALLONS OF WATER PER MINUTE.

PROPOSED 2nd FLOOR PLAN

BATHROOM VENT TO TERMINATE AT LEAST 3-FEET ABOVE THE HIGHEST POINT WHERE IT PASS THROUGH A ROOF, AND AT LEAST 2-FEET HIGHER THAN ANY PORTION OF THE BUILDING WITHIN A HORIZONTAL DISTANCE OF IO-FEET (CPC 509.5.4).

**TOWN HOUSE** 

owner

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**ADDITION &** REMODEL

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> > DESIGN SERVICES

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SHEET TITLE EXISTING +

PROPOSED 2nd FLOOR PLANS

REVISION

SHEET

DATE 05.05.21 DRAWN AA SCALE AS SHOWN

**A-3** 

(E) BALCONY BALCONY (E) 4:12 VIF. (E) 4:12 ∨IF.  $\overline{\Box}$  $\overline{\Box}$  $\overline{\Box}$ (E) 4:12 ∨IF. (E) 4:12 \_ . \_ . \_ . \_ . \_ . \_ . \_ . (N) FLAT ROOF ADDITION AREA LEGEND & NOTES : D.S. DOWN SPOUT SPLASH BLOCK & COBBLESTONES TYP. FOR ALL DOWN SPOUTS TO REDUCE VELOCITY OF ROOF WATERS TO PREVENT EROSION LANDSCAPE AREAS. RAINWATER LEADERS FROM ROOF GUTTERS SHALL NOT BE PIPED DIRECTLY TO THE STORM DRAIN. THEY SHALL BE CONNECTED TO AN EARTHEN SWALES AND AREA DRAIN(S) CONNECTED TO THE STORM  $\overline{\Box}$  $\overline{\Box}$ DRAIN SYSTEM, OR A COMPARABLE METHOD TO EFFECTIVELY REDUCE THE ENTRY OF POLLUTANTS INTO STORM WATER RUNOFF  $\overline{\Box}$ (E) 4:12 (E) 4:12 VIF. ₹ VENTING NOTES: (N) 4:12 TO MATCH (E) USE 4 - 2-1/24 DRILLED SCREEDED VENT HOLES AT EACH EAVE BLOCK TO PROVIDE LOW VENTING. PROVIDE I HR FIRE RATED
EAVE AND WALL AT THE BAFFLE BATT INSULATION TO ALLOW FREE FLOW OF AIR. AREA LESS THAN 5' AWAY FROM PROPERTY LINE.
PROVIDE EYEBROW VENT
TO REPLACE BLOCK ROOF NOTES: FRAMING : CONVENTIONAL ROOF FRAMING **ROOF PITCH: 4/12** VENTS AT THIS AREA, SEE ROOFING : CLASS A COMP. SHINGLES, UON. DETAILS 8, 12 \$ 13/A-9 TYP. DECKING : OSB ROOF SHEETING (SEE SHEAR SCHEDULE)
FASCIA : 2x8 WOOD FASCIA BOARD TYP AT EAVES, PAINTED GUTTER & DS: ALUMINUM SOFFITS : CLOSED WOOD SOFFIT W/ GALV. METAL SCREENED VENT BALCONY ALL DOWN SPOUT TO BE CONNECTED TO UNDERGROUND PERFORATED PIPE TO BUBBLE UP ON THE LANDSCAPE AREA. 

PROPOSED ROOF PLAN

SCALE 1/4" = 1'-0"

EXISTING ROOF PLAN

SCALE 1/4" = 1'-0"

Shai &

TOWN HOUSE

202 ALTURA VISTA,

**ADDITION &** REMODEL

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SHEET TITLE

EXISTING + PROPOSED **ROOF PLANS** 

REVISION

DATE 05.05.21 DRAWN AA

SCALE AS SHOWN SHEET

OF 13 SHEETS



# EXTERIOR ELEVATION AND SITE NOTES

- I. EXTERIOR WALL: WOOD LAP SIDING O/ 2 LAYERS TYPE D' PAPER O/ PLYWOOD SHEATHING (COLOR & TEXTURE TO MATCH EXISTING)ROOFING: CLASS A COMP. SHINGLES (COLOR TO MATCH EXISTING)
- 2. WINDOWS: MILGARD VINYL DUAL PANE WHITE OR SIM. (SEE SCHEDULE)
- 3. WINDOW TRIM: STUCCO FOAM 2X (COLOR TO MATCH EXISTING)
- 4. GUTTER: ALUMINUM FASCIA (COLOR TO MATCH EXISTING)
- 5. FASCIA BOARD: PAINTED (COLOR TO MATCH EXISTING)
  6. WALL TO ROOF FLASHING: GALV. METAL PAINTED TO MATCH (E).
- SCREEN HOLES
  CORROSION RESISTANT
  METAL MESH w/ ½" x ½"

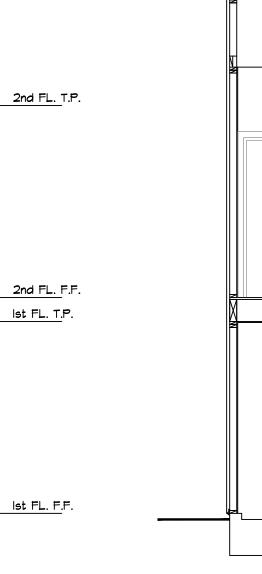
  MIN. 2.5" Ø HOLES
  AREA = 4.91 SQ. IN. EA.

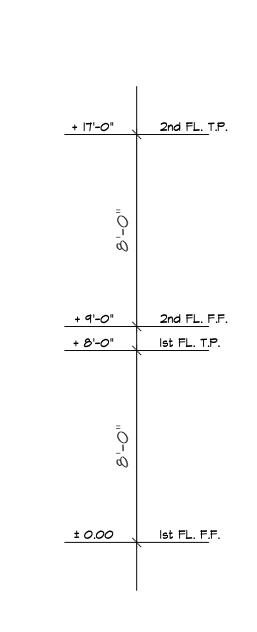
  1 FRIEZE BLK. AREA =
  4 x 4.91 SQ. IN. = 19.625 SQ. IN. = 0.136 S.F.

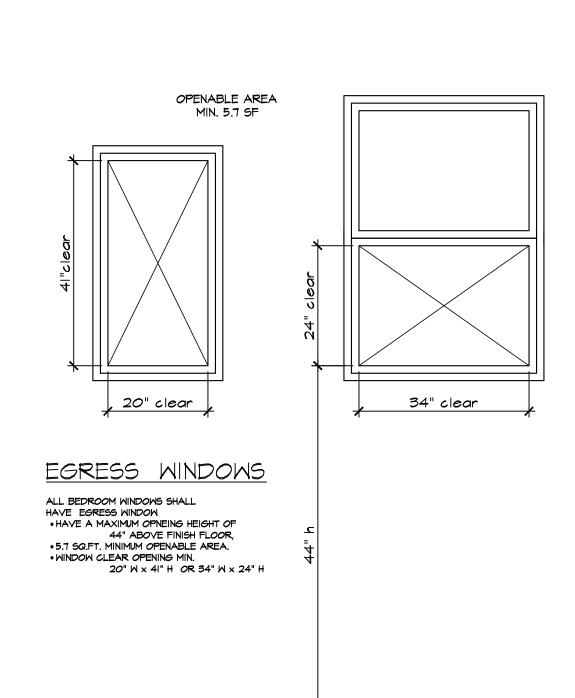
VENT CAL	CULATIONS
	NEW ATTIC VENT  REQUIREMENT   SF/150 SF   ATTIC VENT 3" × 22" = .136 SF 3" WIDE CEILING VENT -> 36 SQINCH : 144 = .25 SF PER IFT'
NOTE: CONTRACTOR TO INSTALL ADDITIONAL VENTS TO COMPENSATE FOR ANY EXISTING VENTS OBSTRUCTED BY THE NEW WORK.	(N) ROOF ATTIC AREA: 417 SF 417 : 150 = 2.78 2.78 : .136 = 20.44 -> USE MIN. 24 BLOCK VENTS
VENT PLACEMENTS SHALL BE EVENLY DISTRIBUTED TO ENCOURAGE CROSS VENTILATION THROUGHOUT.	OPTIONAL: USE 3" WIDE CEILING VENT ALONG OVERHANG PERIMETER

BEDROOM 2

(E) GARAGE





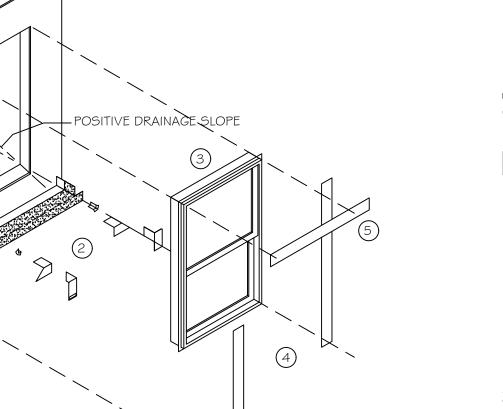


PAN FLASHING INSTALLATION

- I. INSTALL FLEXIBLE PAN FLASHING TO COVER THE SLOPED SILL/THRESHOLD, 3-INCHES OF FACE OF WALL, AND 3-INCHES OF
- EACH JAMB. PINSTALL CORNER ELASHINGS
- 2. INSTALL CORNER FLASHINGS 3. INSTALL WINDOW/DOOR UNIT
- 4. INSTALL FLASHING COVERING FLANGE AND WALL ALONG EACH JAMB
- AND 3-INCHES ABOVE THE HEAD AND BELOW THE SILL/THRESHOLD 5. INSTALL FLASHING COVERING A MINIMUM OF 3-INCHES OF THE WALL FACE AT THE HEAD AND JAMBS.
- 6. FOLD AND ADHERE SILL/THRESHOLD PAN LEG ONTO INTERIOR FACE OF FRAME, NOT SHOWN. PROTECT LEG FROM DAMAGE UNTIL THE INTERIOR TRIM OR FINISH IS INSTALLED.

NOTE: SURFACES RECEIVING FLASHING SHALL BE FREE OF IRREFULARITIES. APPLY SEALANT/ADHESIVE TO CLEAN AND DRY SURFACES RECEIVING FLASHING. LIQUID ADJESIVE SHALL BE COMPATIBLE

WITH SUBSTRATE AND MEET CALGREEN VOC REQUIREMENTS.



# TOWN HOUSE

202 ALTURA VISTA, LOS ALTOS, CA 95032

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SHEET TITLE

ELEVATIONS + SECTION

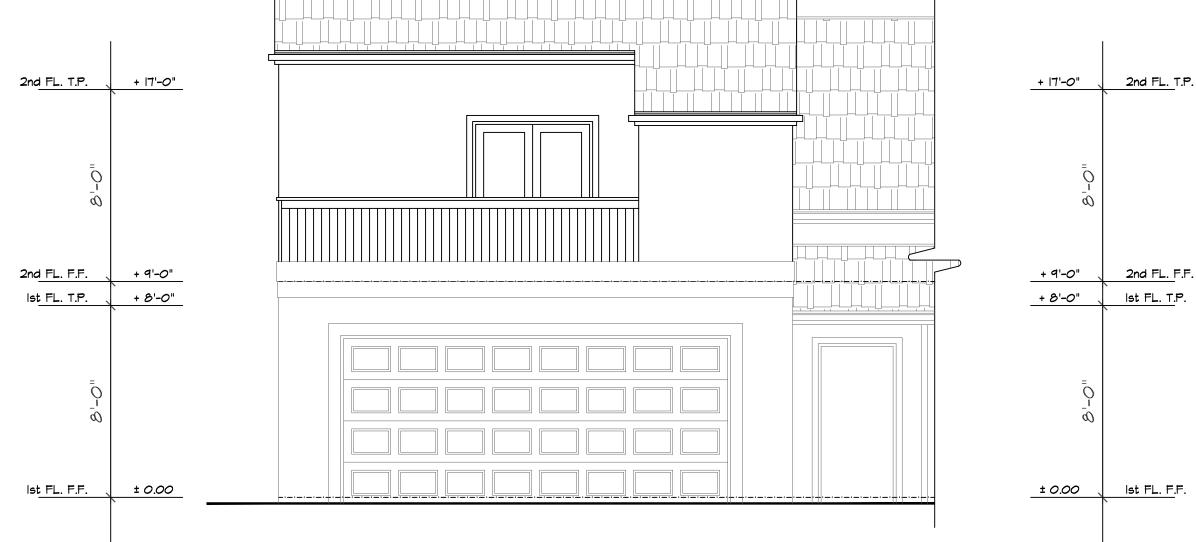
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SCALE AS SHOWN

SHEET

**A-5**OF 13 SHEETS

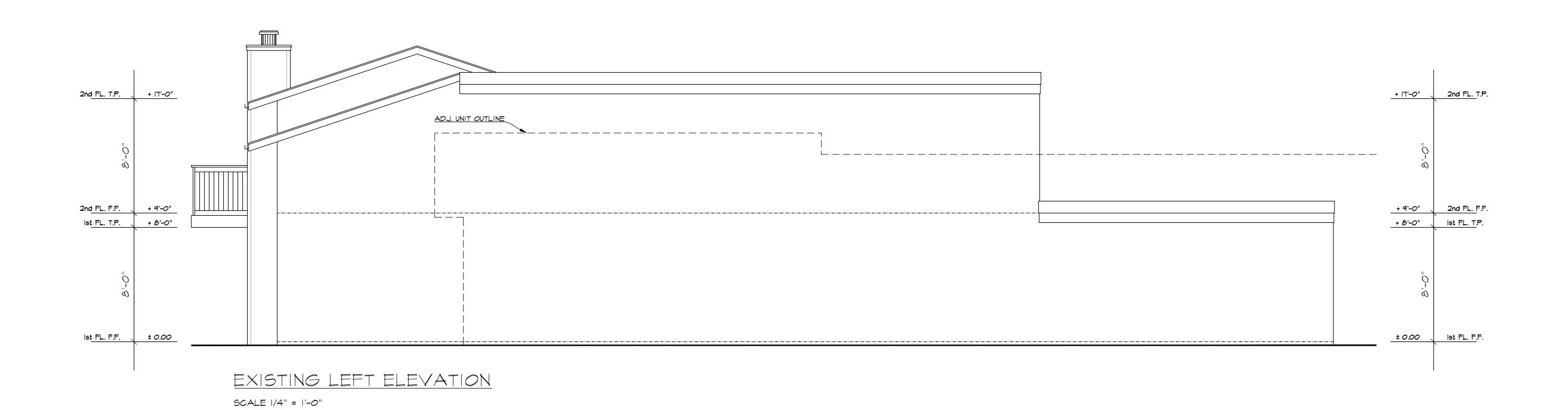


EXISTING FRONT ELEVATION

SCALE 1/4" = 1'-0"

<u>SECTION A-A</u> SCALE 1/4" = 1'-0"

owner
Shai &
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TOWN HOUSE

PROJECT

202 ALTURA VISTA,

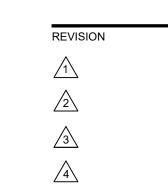
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# **ELEVATIONS**



SHEET TITLE

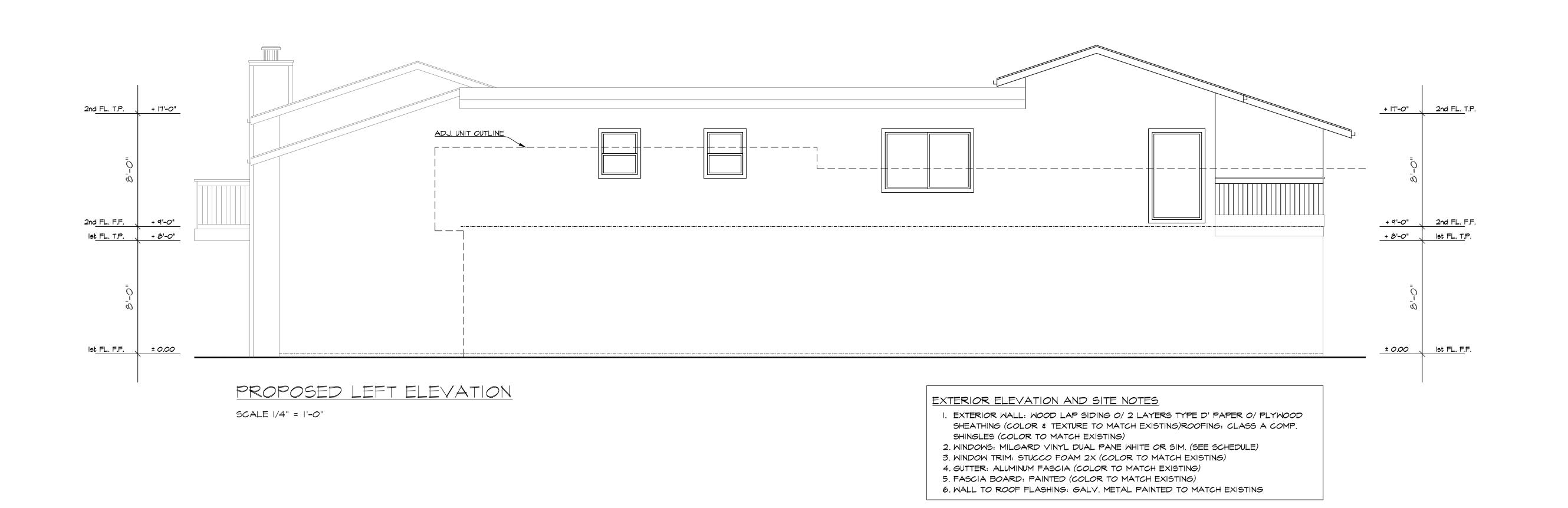
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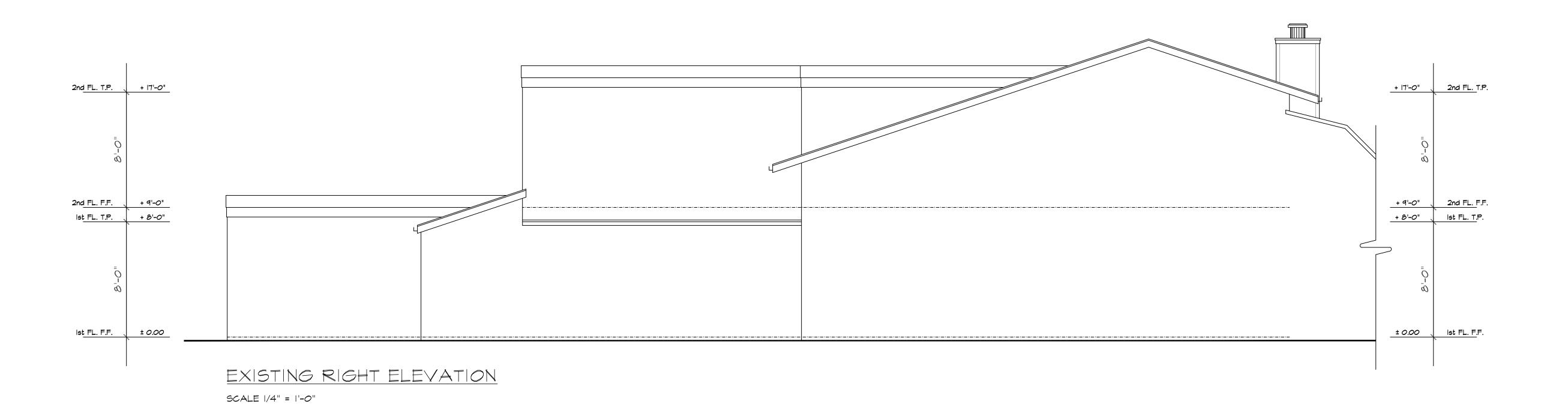
SCALE AS SHOWN

SHEET

**A-6** OF 13 SHEETS



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TOWN HOUSE

202 ALTURA VISTA,

**ADDITION &** REMODEL

> AA HOME DESIGN & BUILD LLC

> > DESIGN SERVICES

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**ELEVATIONS** 

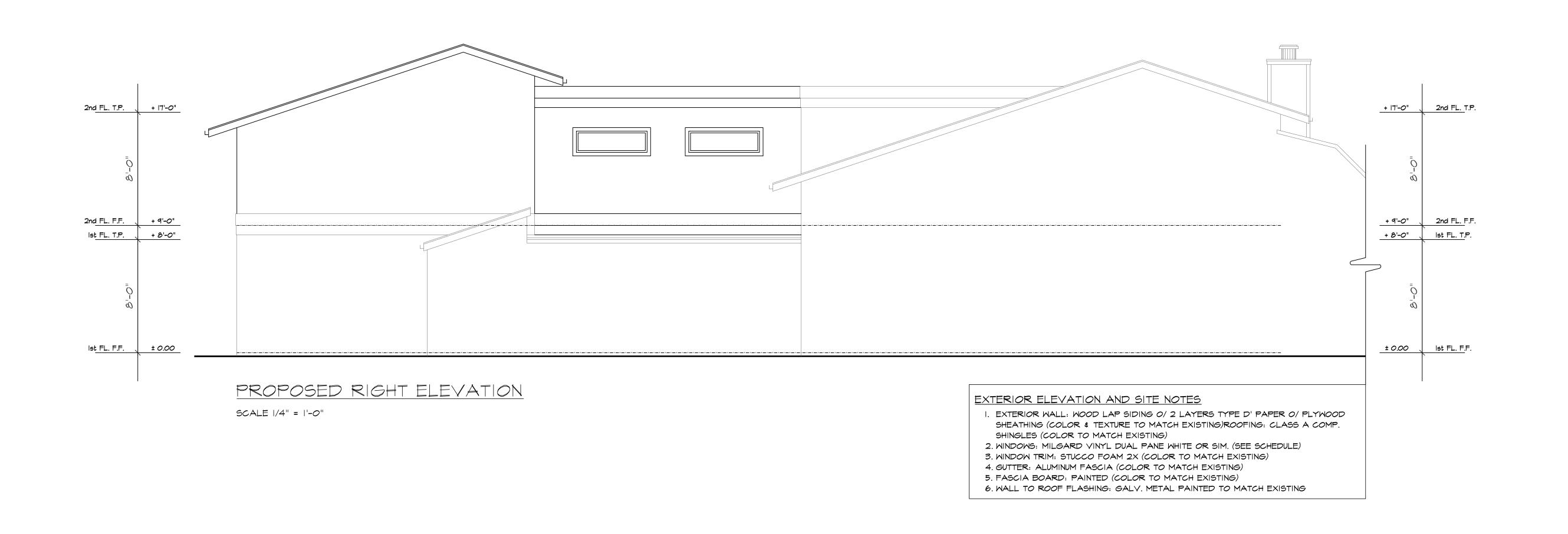
REVISION

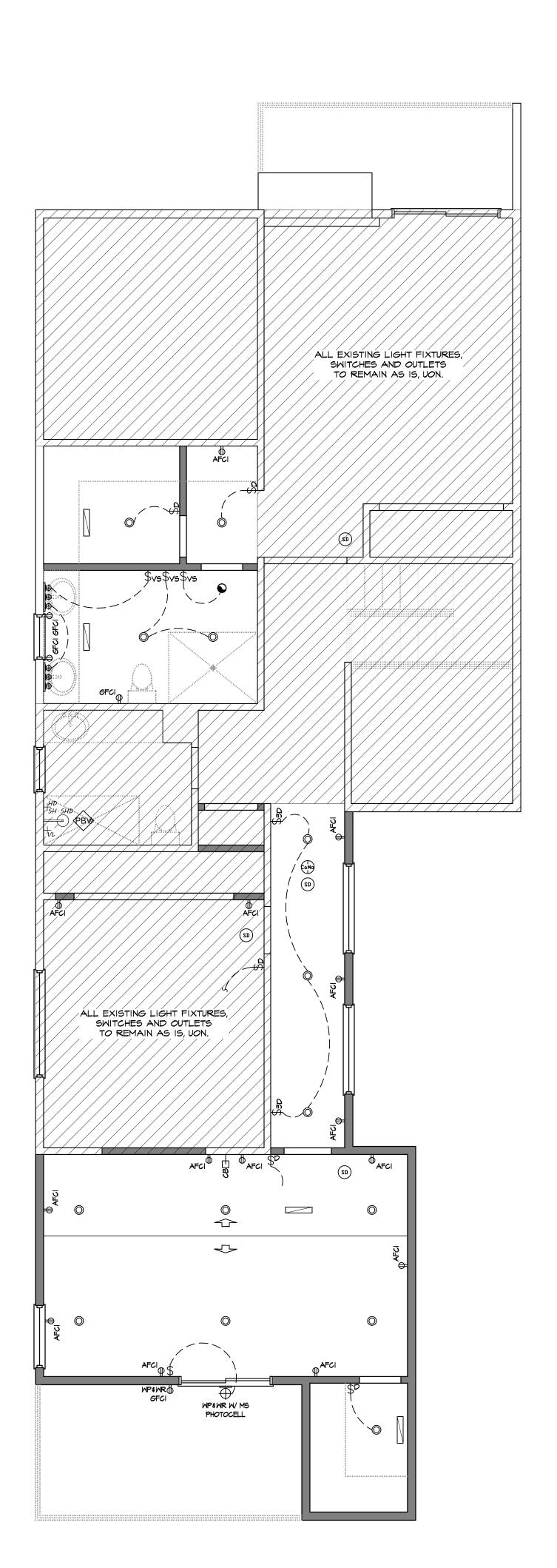
SHEET TITLE

DATE 05.05.21 DRAWN AA SCALE AS SHOWN

SHEET

A-7 OF 13 SHEETS





### LEGEND & NOTES :

- \$ SWITCH 3 WAY
- $\$_3$  SWITCH 3 WAY
- \$p SWITCH DIMMER
- \$ SWITCH FAN
- \$ SWITCH OCCUPANCY SENSOR

  PROOFED, TYPICAL
- Φ<sub>AFCI</sub> ELECTRICAL OUTLET w/ ARC FAULT CIRCUIT INTERRUPTER
- POFCI ELECTRICAL OUTLET W/ GROUND FAULT CIRCUIT INTERRUPTER

  POFCI ELECTRICAL OUTLET W/ GROUND FAULT CIRCUIT INTERRUPTER &
- WATERPROOFED

  SPECIAL PURPOSE DEDICATED CIRCUT AND INTERNET CABLE
- \$\Pi\_{220v}\$ ELECTRICAL OUTLET 220 VOLTS
  \$\Pi\_{1122}\$ ELECTRICAL OUTLET 1/2 HOT
- O CAN LIGHT FIXTURE LED
- ₩ WALL MOUNT LIGHT FIXTURE
- TABLE LAMP
- FLUORESCENT OR LED

  PENDANT LIGHT FIXTURE

  CHANDELIER LIGHT FIXTURE
- CHAND.

  SURFACE MOUNTED FLUORESCENT

  LIGHT FIXTURE



# O VAPOR LED LIGHT FI

- VP VAPOR LED LIGHT FIXTURE
  - (ST) SUN TUNNEL
  - SMOKE DETECTOR
  - APPROVED CARBON MONOXIDE DETECTOR
  - S EXHAUST FAN
  - T AUTOMATIC SETBACK
  - THERMOSTAT

    SUPPLY REGISTER AT CEILING
  - SUPPLY REGISTER AT FLOOR

    WALL REGISTER AT 90" OR 16"
  - WH. WALL HEATER
  - CAR. COLD AIR RETURN REGISTER
  - NATURAL GAS STUB OUT
  - HB HOSE BIBB STUB OUT
  - PRESSURE BALANCE VALVE

FL = FLUORESCENT LIGHT FIXTURE
MS = MOTION SENSOR EQUIPPED
(E) = EXISTING

- (R/E) = RELOCATE EXISTING
  U.O.N = UNLESS OTHERWISE NOTED
  (V/P) = VERIFY/PROVIDE
- 1) CONTRACTOR TO REFER TO MANUFACTURED SPEC SHEETS TO VERIFY ALL MECHANICAL REQUIRES AND LOCATIONS.

2) ALL FIXTURES ARE TITLE 24 COMPLIANT.

# GENERAL ELECTRICAL NOTES:

- I. PROVIDE GFCI PROTECTED OUTLETS IN BATHROOMS, KITCHEN WITHIN 6" OF ALL SINKS IN WET BAR AND IN THE GARAGE -NON-DEDICATED -
- 2. I. PROVIDE MINIMUM ONE WEATHER PROOF GFCI OUTLET OUTSIDE AND WEATHER PROOF LIGHTING FIXTURE AT EXTERIOR.

  2. PROVIDE MINIMUM ONE RECEPTACLE OUTLET AT BATHROOM, OUTSIDE, GARAGE, BASEMENT
- 3. RECEPTACLE OUTLETS IN KITCHEN SHALL BE INSTALLED
- I. ON COUNTER SPACES 12" OR WIDER 2. NOT MORE THAN 4 FT ON CENTERS
- 2. NOT MORE THAN 4 FT ON CENTERS
  3. NOT MORE THAN 2 FT FROM AN EDGE COUNTER.
  4. RECEPTACLES TO SERVE PENINSULA AND OR ISLAND SHALL BE INSTALLED ABOVE OR WITHIN 12" BELOW COUNTER TOP.I EVERY 4 FT (CEC 210.52)
- 5. COUNTER TOP SPACES SEPARATED BY RANGE TOPS, REFRIGERATORS, OR SINKS SHALL BE CONSIDERED AS SEPARATE COUNTER TOP SPACES

  6. APPLIANCE CIRCUITS: PROVIDE AN INDIVIDUAL 15 OR 20 AMP CIRCUIT FOR BUILT IN, FASTENED IN PLACE APPLIANCES AND LAUNDRY APPLIANCES. 15 AMP CIRCUIT FOR EACH
- GARBAGE DISPOSAL, DISH WASHER, TRASH COMPACTOR, REFRIGERATOR

  7. ALL NEW 120-VOLT, SINGLE PHASE, 15 AND 20 AMP BRANCH CIRCUITS INSTALLED IN
  DWELLING UNIT FAMILY ROOMS, KITCHENS, DINING ROOMS, LIVING ROOMS, PARLORS,
  LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS,
  LAUNDRY ROOMS OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY A LISTED
  ARC-FAULT CIRCUIT INTERRUPTER, COMBINATION TYPE, INSTALLED TO PROVIDE
  PROTECTION OF THE BRANCH CIRCUITS. (CEC 210.12(A))
- 8. MINIMUM I GFCI RECEPTACLE OUTLET SHALL BE INSTALLED WITHIN 36" OF EA BASIN ON BASIN ADJACENT WALL
- 9. A RECEPTACLE OUTLET SHALL BE INSTALLED IN ALL HABITABLE ROOMS : I. ON WALL SPACES 2 FEET OR WIDER
- 2. NOT MORE THAN 6 FEET FROM OPENINGS
  3. NOT MORE THAN 12 FEET ON CENTERS (CEC 210.52)
- 10. 1. PROVIDE MIN. I OUTLET IN HALLWAYS 10' OR LONGER
  2. PROVIDE SMITCH AND LIGHTS AT ATTIC, CRAWL SPACE, UTILITY ROOM OR AREAS W/
- HVAC EQUIPMENT (NEC210-70-A)

  II. SURFACE-MOUNTED OR CLOTHES ROD LUMINARIES OR LED THAT ARE LISTED MAY BE
- USED IN CLOTHES CLOSETS, INCLUDING STORAGE SPACE, 2019 CEC, ARTICLE 410.16(A) \$ 410.16(C)(5)

  12. PENDANT FIXTURES, AND PANEL BOARDS ARE NOT ALLOWED IN STORAGE CLOSETS (CEC
- 12. PENDANT FIXTURES, AND PANEL BOARDS ARE NOT ALLOWED IN STORAGE CLOSETS (CEC 410.16)

  13. PROVIDE AUTOMATIC SETBACK THERMOSTAT.
- 14. SMOKE DETECTORS SHALL BE 110V WITH BATTERY BACKUP, INSTALLED HARD WIRED INTERCONNECTED, THEY SHALL BE INSTALLED AT EACH BEDROOM & HALLWAY LEADING TO BEDROOMS, LOCATED PER 2019 CFC 907.2.11. SMOKE DETECTORS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING WHEN SUCH WIRING IS SERVED FROM COMMERCIAL SOURCE. THE DETECTOR SHALL EMIT A SIGNAL WHEN THE BATTERIES ARE
- 15. PROVIDE APPROVED CARBON MONOXIDE ALARMS BY 2019 CRC 315. CO DETECTORS
  SHALL BE INTERCONNECTED TO SOUND SIMULTANEOUSLY, MINIMUM I (ONE) PER DWELLING
  LEVEL, INCLUDING BASEMENT, AND OUTSIDE OF THE BEDROOM AREA
  16. ALL 125-VOLT. 15 AND 20 AMPERE RECEPTACLE OUTLETS SHALL BE LISTED
- TAMPER-RESISTANT RECEPTACLES PER CEC 406.II.

  17. RECESSED LUMINARIES IN INSULATED CEILINGS SHALL SATISFY 2019 CA ENERGY CODE SECTION 150(k) 12 REQUIREMENTS
- SECTION 150(k) 12 REQUIREMENTS.

  18. EACH BATHROOM CONTAINING A BATHTUB, SHOWER OR TUB/SHOWER COMBINATION SHALL BE MECHANICALLY VENTILATED FOR PURPOSE OF HUMIDITY CONTROL IN ACCORDANCE
- WITH THE CALIFORNIA MECHANICAL CODE, CHAPTER 4; AND THE CALIFORNIA GREEN BUILDINGS STANDARDS CODE, CHAPTER 4, DIVISION 4.5.

  19. KITCHEN HOODS, BATHROOM FANS, AND OTHER EXHAUST FAN DUCTS SHALL TERMINATE OUTSIDE THE BUILDINGS AND HAVE A BACK DRAFT DAMPER. WHEN THE EXHAUST FAN OPERATES CONTINUOUSLY, A BACK DRAFT DAMPER IS NOT REQUIRED.

# RCP + ME 2nd FLOOR PLAN

SCALE |/4" = |'-0"

CALGREEN 2019 MANDATORY MEASURES:

4.304.I

AUTOMATIC IRRIGATION SYSTEM CONTROLLERS FOR LANDSCAPING SHALL BE WEATHER BASED INSTALL LANDSCAPE AUTOMATIC IRRIGATION SYSTEM CONTROLLERS, BRAND IRRITOL SD600 INT OR EQUIVALENT, WBIC (WEATHER BASED IRRIGATION CONTROL (SWAT TESTED - SMART WATER APPLICATION TECHNOLOGY)

4.406.I

JOINTS AND OPENINGS. ANNULAR SPACES AROUND PIPES, ELECTRIC CABLES, CONDUITS OR OTHER OPENINGS IN PLATES AT EXTERIOR WALLS SHALL BE PROTECTED AGAINST THE PASSAGE OF RODENTS BY CLOSING SUCH OPENINGS WITH CEMENT MORTAR, CONCRETE MASONRY OR SIMILAR METHOD ACCEPTABLE TO THE

ENFORCING AGENCY.

4.503.I INSTALLED GAS FIREPLACE SHALL BE A DIRECT-VENT SEALED-COMBUSTION TYPE.

HEATILATOR GAS FIREPLACE ANSI Z.21.88 MODEL ND3630 T/R/ DV DIRECT VENT,

SEALED COMBUSTION TYPE, NO CHIMNEY OR SIMILAR TO.

4.504.1 DUCT OPENINGS AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED DURING CONSTRUCTION.
4.506.1 EXHAUST FANS WHICH TERMINATE OUTSIDE THE BUILDING ARE PROVIDED IN EVERY BATHROOM.

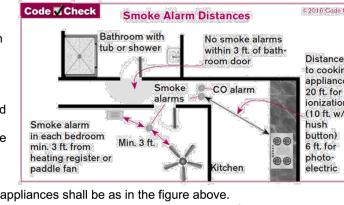
4.507.1 WHOLE HOUSE EXHAUST FANS: N/A IN THIS PROJECT.
-BUILD IT GREEN POINT RATED SINGLE FAMILY CHECKLIST H.9.C: MECHANICAL VENTILATION SYSTEM FOR COOLING AUTOMATICALLY CONTROLLED INTEGRATED SYSTEM WITH VARIABLE SPEED CONTROL. AN INTEGRATED VENTILATION COOLING SYSTEMS WITH HEATING AND COOLING EQUIPMENT TO DELIVER OUTDOOR AIR ("ECONOMIZER")

4.507.2 HVAC SYSTEM SHALL BE SIZED, DESIGNED & HAVE THEIR EQUIPMENT SELECTED USING METHOD ACCA MANUAL J, D, & S OR ASHRAE HANDBOOKS OR OTHER EQUIVALENT DESIGN SOFTWARE METHODS
HEAT LOST & GAIN ACCORDING TO ACCA MANUAL J DUCT SYSTEMS ARE SIZED ACCORDING ACCA MANUAL D. SELECT HEATING & COOLING EQUIPMENT ACCORDING ACCA 36-S MANUAL S.

### Smoke and Carbon Monoxide Alarms

• Smoke alarms must be located in the same areas that are required for new dwellings – in each sleeping room, outside each sleeping area (e.g., hallways), and on each story. [CRC 314.3]. In dwellings with split levels without an intervening door the upper level alarm shall suffice for the lower level provided the lower level is less than one full story below the upper level. Smoke alarms must be at least 3 feet from the door or opening of a bathroom that contains a tub or shower

unless this would prevent placement of a



required smoke alarm. Distances to cooking appliances shall be as in the figure above.
Carbon Monoxide Alarms are required in dwellings equipped with gas appliances or a fireplace or an attached garage. They must be located outside each sleeping area (e.g., hallways) and on each floor level. If a fuel-burning appliance is installed in a bedroom, a carbon monoxide alarm must also be installed in that bedroom. [CRC 315.2.2 & 315.3]

• Alarms require a hardwired power source with battery backup and interconnection so that if one alarm activates all are activated. New hardwired alarms must be on a circuit protected by an AFCI circuit breaker. Hard-wiring and interconnection is required for remodeling, additions, or alterations that have an accessible attic space usable for alarm wiring or that include removal of existing wall or ceiling finishes that can be used for alarm wiring. Battery-only alarms are allowed for alterations solely on the exterior (reroofing, decks, new windows) and for work limited to alteration or repair of plumbing, mechanical, or electrical systems (such as furnace replacement or panel upgrades). Battery-only alarms are allowed for projects where this is no removal of ceiling finishes and no accessible attic. [CRC 314.4&6, 315.5Exc.4].

# 2019 BEES 150.0 (k)

- A. ALL INSTALLED LUMINARIES SHALL BE HIGH-EFFICACY IN ACCORDANCE WITH TABLE 150.0-A.
- ACCORDANCE WITH TABLE 150.0-A.

  B. ALL LUMINARIES REQUIRED TO HAVE LIGHT SOURCES

  COMPLIANT WITH REFERENCE JOINT APPENDIX JAB, EXCEPT

  HALLWAYS AND CLOSETS OVER 70 SF, SHALL BE CONTROLLED
- BY DIMMERS OR VACANCY SENSORS. (THIS APPLIES TO ALL GU-24 LEDS AND RECESSED LUMINAIRES.) CBEES 150.0(k)2K.

  C. IN BATHROOMS, GARAGES, LAUNDRY ROOMS, AT LEAST ONE
- LUMINAIRE IN EACH OF THESE SPACES SHALL BE CONTROLLED BY A VACANCY SENSOR.

  D. OUTDOOR LIGHTING: ALL OUTDOOR LIGHTING SHALL BE CONTROLLED BY A MANUAL ON AND OFF SWITCH THAT DOES
- CONTROLLED BY A MANUAL ON AND OFF SWITCH THAT DOES NOT OVERRIDE TO ON AND ONE OF THE FOLLOWING:
  CONTROLLED BY POHOTOCELL AND MOTION SENSOR, PHOTO
  CONTROL AND AUTOMATIC SWITCH CONTROL, ASTRONOMICAL
  TIME CLOCK, OR ENERGY MANAGEMENT CONTROL SYSTEM.

ENERGY STAR RATED EXHAUST
FANS WITH A MINIMUM 50 CFM
(INTERMITTENT) OR 25 CFM
(CONTINUOUS) VENTING DIRECTLY TO
THE OUTSIDE, WITH HUMIDITY
(30-80%) CONTROL. CRC R303.3.I
AND CAL GREEN BUILDING CODE
4.506.I

ALL OUTDOOR RECEPTACLES SHALL
BE GFCI PROTECTED AND
WATERPROOF. BE SURE TO
PROVIDE AT LEAST ONE OUTLET AT
THE FRONT AND REAR OF THE
HOME, WITHIN 6.5-FEET OF GRADE.

CEC 210.8(A)(3), CEC 406.9

AT THE TIME OF ROUGH
INSTALLATION OR DURING STORAGE
ON THE CONSTRUCTION SITE AND
UNTIL FINAL STARTUP OF THE
HEATING AND COOLING EQUIPMENT,
ALL DUCTS AND OTHER RELATED
AIR DISTRIBUTION COMPONENT

A PRESSURE

ABSORBING DEVICE

(OR APPROVED

MECHANICAL DEVICE),

LOCATED AS CLOSE AS

POSSIBLE TO QUICK

ACTING VALVES, THAT

WILL ABSORB HIGH

PRESSURES RESULTING

FROM THE QUICK

CLOSING OF

QUICK-ACTING VALVES

(I.E., DISHWASHER,

MASHING MACHINE,

ETC.). CPC 609.10

AIR DISTRIBUTION COMPONENT
METHODS SHALL BE COVERED WITH
TAPE, PLASTIC, SHEET METAL OR
OTHER METHODS ACCEPTABLE TO
REDUCE THE AMOUNT OF DUST OR
DEBRIS WHICH MAY COLLECT IN THE
SYSTEM. (CGBSC 4.504.1)

ALL LED, HALOGEN, ETC. LAMPS
SHALL MEET ENERGY STAR
REQUIREMENTS AND THE BOX IS
AVAILABLE TO THE INSPECTOR
UPON REQUEST.

# TOWN HOUSE

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# ADDITION & REMODEL

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SHEET TITLE

# **ELEVATIONS**

REVISION

1
2

<u>3</u>

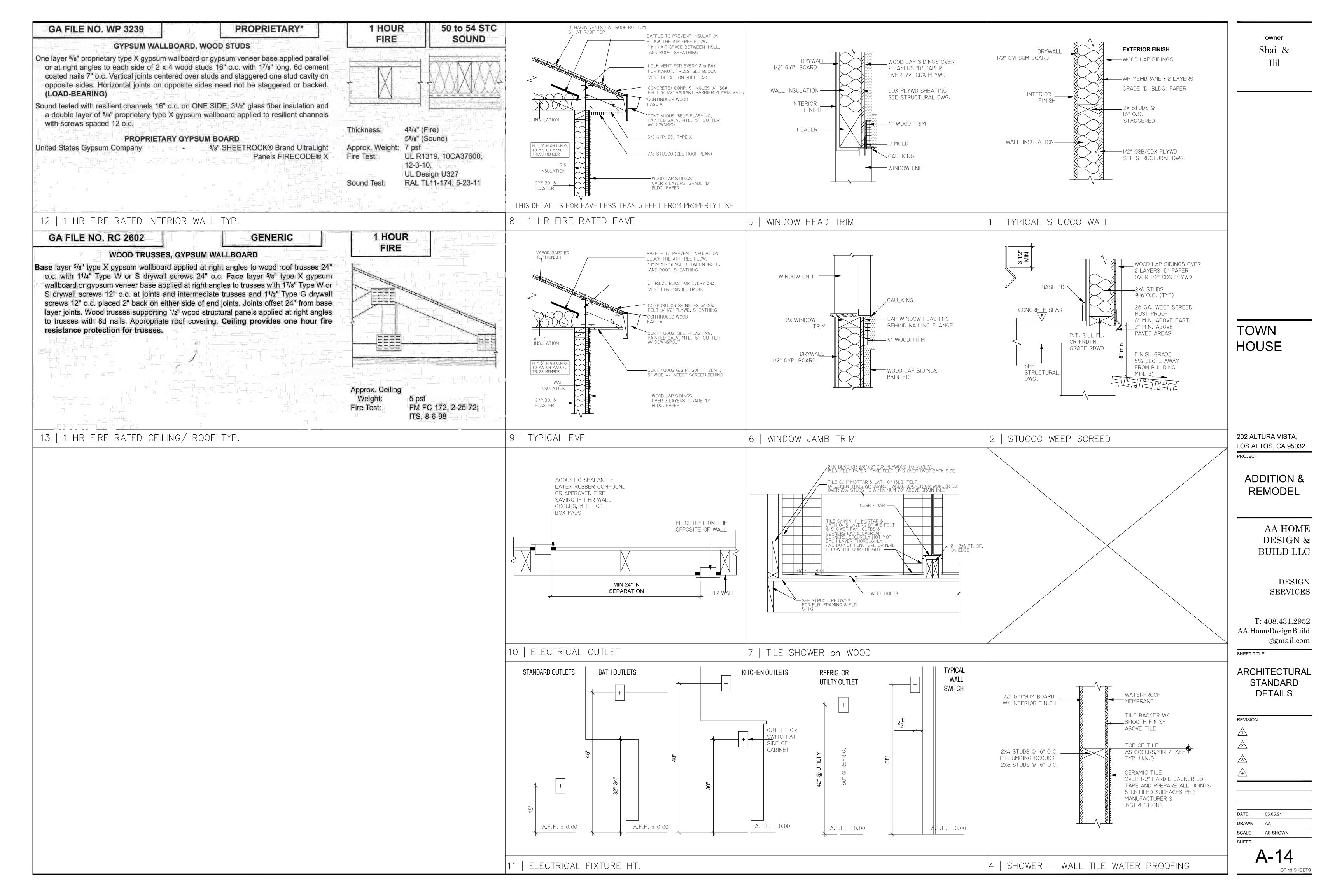
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SCALE AS SHOWN

SHEET

**-8**OF 13 SHEETS



CF1R-PRF-01E

Project Name: Altura Vista AdditionCalculation Date/Time: 2021-04-20T13:15:05-07:00(Page 1 of 10)Calculation Description: Title 24 AnalysisInput File Name: Altura Vista Addition (202).ribd19x	Project Name: Altura Vista AdditionCalculation Date/Time: 2021-04-20T13:15:05-07:00(Page 2 of 10)Calculation Description: Title 24 AnalysisInput File Name: Altura Vista Addition (202).ribd19x	Project Name: Altura Vista AdditionCalculation Date/Time: 2021-04-20T13:15:05-07:00(Page 3 of 10)Calculation Description: Title 24 AnalysisInput File Name: Altura Vista Addition (202).ribd19x	Project Name: Altura Vista AdditionCalculation Date/Time: 2021-04-20T13:15:05-07:00(Page 4 of 10)Calculation Description: Title 24 AnalysisInput File Name: Altura Vista Addition (202).ribd19x
GENERAL INFORMATION  01 Project Name Altura Vista Addition	REQUIRED SPECIAL FEATURES  The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis.	OPAQUE SURFACES           01         02         03         04         05         06         07         08         09         10         11	OPAQUE SURFACES           01         02         03         04         05         06         07         08         09         10         11
02 Run Title Title 24 Analysis	New ductwork added is less than 40 ft. in length	Name Zone Construction Azimuth Orientation Gross Area (ft²) Window and Door Window an	Name Zone Construction Azimuth Orientation Gross Area (ft²) Window and Door Area (ft²) Wall Exceptions Status Verified Existing Condition
03         Project Location         202 Altura Vista           04         City         Los Gatos         05         Standards Version         2019	HERS FEATURE SUMMARY  The following is a summary of the features that must be field-verified by a certified HERS Rater as a condition for meeting the modeled energy performance for this computer analysis. Additional	Front Wall Existing Living Area R-0 Wall 0 Front 40 38 90 none Existing No	Roof 3 Existing Living Area R-11 Roof Attic n/a n/a 931 n/a n/a Existing No
06         Zip code         95032         07         Software Version         EnergyPro 8.2           08         Climate Zone         4         09         Front Orientation (deg/ Cardinal)         0	detail is provided in the building tables below. Registered CF2Rs and CF3Rs are required to be completed in the HERS Registry  Building-level Verifications:	Left Wall Existing Living Area R-0 Wall 90 Left 424 0 90 none Existing No	Roof 4         New Living Area         R-30 Roof Attic         n/a         n/a         417         n/a         n/a         n/a         New         n/a           Front Wall 4        Garage         R-0 Wall         0         Front         168         0         90         none         Existing         No
10 Building Type   Single family   11 Number of Dwelling Units   1  12 Project Scope   AdditionAlteration   13 Number of Bedrooms   3	None Cooling System Verifications:	Rear Wall Existing Living Area R-0 Wall 180 Back 216 87 90 none Existing No	Left Wall 4         _Garage_         R-0 Wall         90         Left         160         0         90         none         Existing         No           Rear Wall 4         _Garage_         R-0 Wall         180         Back         168         0         90         none         Existing         No
14 Addition Cond. Floor Area (ft²) 417 15 Number of Stories 2	None Heating System Verifications:      None	Right Wall Existing Living Area R-0 Wall 270 Right 448 53 90 none Existing No	Right Wall 4
16     Existing Cond. Floor Area (ft²)     2108     17     Fenestration Average U-factor     0.3       18     Total Cond. Floor Area (ft²)     2525     19     Glazing Percentage (%)     12.20%	HVAC Distribution System Verifications:  - None	Front Wall 2 Existing Living Area R-0 Wall 0 Front 72 0 90 none Existing No	OPAQUE SURFACES - CATHEDRAL CEILINGS           01         02         03         04         05         06         07         08         09         10         11         12         13         14
20 ADU Bedroom Count n/a 21 ADU Conditioned Floor Area n/a	Domestic Hot Water System Verifications:  - None	Left Wall 2 Existing Living Area R-0 Wall 90 Left 424 39 90 none Existing No	Name of the State
22 Is Natural Gas Available? Yes	BUILDING - FEATURES INFORMATION	Rear Wall 2 Existing Living Area R-0 Wall 180 Back 216 40 90 none Existing No	D.O. Doof No.
COMPLIANCE RESULTS  01 Building Complies with Computer Performance	01 02 03 04 05 06 07  Project Name Conditioned Floor Area (ft <sup>2</sup> ) Number of Dwelling Number of Bedrooms Number of Zones Number of Water	Right Wall 2 Existing Living Area R-0 Wall 270 Right 272 0 90 none Existing No	Roof Garage R-0 Roof No Attic 0 Front 452 0 4 0.1 0.85 No Existing No
02 Building does not require field testing or HERS verification 03 This building incorporates one or more Special Features shown below	Altura Vista Addition 2525 1 3 2 Cooling Systems Heating Systems	Front Wall 3         New Living Area         R-15 Wall         0         Front         168         34         90         Extension         New         n/a           Left Wall 3         New Living Area         R-15 Wall         90         Left         104         22         90         Extension         New         n/a	ATTIC 01 02 03 04 05 06 07 08 09 10
ENERGY USE SUMMARY	ZONE INFORMATION	Rear Wall 3 New Living Area R-15 Wall 180 Back 32 0 90 Extension New n/a	Name Construction Type Roof Rise (x in 12) Reflectance Emittance Barrier Cool Roof Condition
Energy Use (kTDV/ft²-yr) Standard Design Proposed Design Compliance Margin Percent Improvement	01         02         03         04         05         06         07           Zone Name         Zone Type         HVAC System Name         Zone Floor Area (ft²)         Avg. Ceiling Height         Water Heating System 1         Water Heating System 2	Right Wall 3   New Living Area   R-15 Wall   270   Right   320   15   90   Extension   New   n/a	Attic Existing Living Area
Space Heating 51.59 50.15 1.44 2.8	Existing Living Area Conditioned HVAC System1 2108 8 DHW Sys 1 N/A	Nauthion	Attic New Living Area Attic RoofNew Living Area Ventilated 4 0.1 0.85 No No New n/a
IAQ Ventilation 0 0 0	New Living Area         Conditioned         HVAC System1         417         8         DHW Sys 1         N/A	Interior Surface Area Stristing Area 1	
Water Heating         14.16         14.16         0         0           Self Utilization/Flexibility Credit         n/a         0         0         n/a		Roof 2 Existing Living Area R-11 Roof Attic n/a n/a 246 n/a n/a Existing No	
Compliance Energy Total 104.76 100.64 4.12 3.9			
Registration Number: Registration Date/Time: HERS Provider:	Registration Number: Registration Date/Time: HERS Provider:	Registration Number: Registration Date/Time: HERS Provider:	Registration Number: Registration Date/Time: HERS Provider:
CA Building Energy Efficiency Standards - 2019 Residential Compliance Report Version: 2019.1.300 Report Generated: 2021-04-20 13:15:34 Schema Version: rev 20200901	CA Building Energy Efficiency Standards - 2019 Residential Compliance Report Version: 2019.1.300 Report Generated: 2021-04-20 13:15:34 Schema Version: rev 20200901	CA Building Energy Efficiency Standards - 2019 Residential Compliance Report Version: 2019.1.300 Report Generated: 2021-04-20 13:15:34 Schema Version: rev 20200901	CA Building Energy Efficiency Standards - 2019 Residential Compliance Report Version: 2019.1.300 Report Generated: 2021-04-20 13:15:34 Schema Version: rev 20200901
CERTIFICATE OF COMPLIANCE  CF1R-PRF-01E	CERTIFICATE OF COMPLIANCE  CF1R-PRF-01E	CERTIFICATE OF COMPLIANCE  CF1R-PRF-01E	CERTIFICATE OF COMPLIANCE  CF1R-PRF-01E
Project Name: Altura Vista AdditionCalculation Date/Time: 2021-04-20T13:15:05-07:00(Page 5 of 10)Calculation Description: Title 24 AnalysisInput File Name: Altura Vista Addition (202).ribd19x	Project Name: Altura Vista Addition  Calculation Date/Time: 2021-04-20T13:15:05-07:00 (Page 6 of 10)  Calculation Description: Title 24 Analysis Input File Name: Altura Vista Addition (202).ribd19x	Project Name: Altura Vista AdditionCalculation Date/Time: 2021-04-20T13:15:05-07:00(Page 7 of 10)Calculation Description: Title 24 AnalysisInput File Name: Altura Vista Addition (202).ribd19x	Project Name: Altura Vista AdditionCalculation Date/Time: 2021-04-20T13:15:05-07:00(Page 8 of 10)Calculation Description: Title 24 AnalysisInput File Name: Altura Vista Addition (202).ribd19x
FENESTRATION / GLAZING	SLAB FLOORS	OPAQUE SURFACE CONSTRUCTIONS           01         02         03         04         05         06         07         08	WATER HEATERS
01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16	01 02 03 04 05 06 07 08 09 10 Edge Insul. Edge Insul.	Construction Name Surface Type Construction Type Framing Total Cavity R-value U-factor Assembly Layers	01 02 03 04 05 06 07 08 09 10 11 12 13 14
Name Type Surrace Orientation Azimuth (ft) (ft) Wult. (ft <sup>2</sup> ) Oractor Source Source Shading Status Existing Condition	Name Zone Area (ft <sup>2</sup> ) Perimeter (ft) R-value and Depth Carpeted Fraction Heated Status Condition	R-value  Roofing: Light Roof (Asphalt Shingle)	Name   Heating   # of   Iank   Energy   Input Rating   Insulation   Loss or   Rating   R-value
Window Window Front Wall Front 0 1 18 1.19 Table 110.6-B Bug Screen Existing No	Slab Existing Living Area 1177 141 none 0 80% No Existing No	Attic RoofNew Living Attic Roofs Area  Wood Framed Ceiling  Wood Framed 2x4 @ 24 in. O. C. R-0 None / None 0.644 Roof Deck: Wood Siding/sheathing/decking	DHW <= 75
Window - SGD Window Rear Wall Back 180 1 54 1.19 Table 110.6-A 0.83 Table 110.6-B Bug Screen Existing No	Slab 2        Garage         452         82         none         0         0%         No         Existing         No	Cavity / Frame: no insul. / 2x4  Ceilings (below Wood Framed 2x4 @ 24 is Q. C	Heater 1 Gas Small Storage 1 50 0.57-EF kBtu/hr 0 78 n/a n/a n/a Existing No
Window 2 Window Rear Wall Back 180 1 33 1.19 Table 110.6-A 0.83 Table 110.6-B Bug Screen Existing No	OPAQUE SURFACE CONSTRUCTIONS	R-11 Roof Attic  R-11 Roof Attic  R-11 Roof Attic  R-11 Roof Attic  Ceiling  2x4 @ 24 in. O. C.  R-11 None / None  0.081   Cavity / Frame: R-9.1 / 2x4   Inside Finish: Gypsum Board	WATER HEATING - HERS VERIFICATION         01         02         03         04         05         06         07         08
Window 3 Window Right Wall Right 270 1 13 1.19 110.6-A 0.83 110.6-B Bug Screen Existing No	01 02 03 04 05 06 07 08  Tatal Carity Interior / Exterior	R-30 Roof Attic  Ceilings (below attic)  Ceilings (below Ceiling Doists: R-20.9 insul.  Ceiling 2x4 @ 24 in. O. C.  R-30 None / None   None   O.032   Cavity / Frame: R-9.1 / 2x4   Cavity / R-1 / 2x4   Cav	Name Pipe Insulation Parallel Piping Compact Distribution Type Recirculation Control Distribution Heat Recovery
Window - SGD 2 Window Right Wall Right 270 1 40 1.19 Iable 110.6-A 0.83 Iable 110.6-B Bug Screen Existing No Window 4 Window Left Wall 2 Left 90 1 24 0.3 NFRC 0.23 NFRC Bug Screen Altered No	Construction Name Surface Type Construction Type Framing Total Cavity R-value Continuous R-value U-factor Assembly Layers	Inside Finish: Gypsum Board	DHW Sys 1 - 1/1 Not Required Not Required Not Required None Not Required Not Required Not Required
Window 5 Window Left Wall 2 Left 90 1 7.5 0.3 NFRC 0.23 NFRC Bug Screen Altered No	R-0 Wall Exterior Walls Wood Framed Wall 2x4 @ 16 in. O. C. R-0 None / None 0.361 Cavity / Frame: no insul. / 2x4	BUILDING ENVELOPE - HERS VERIFICATION           01         02         03         04	SPACE CONDITIONING SYSTEMS         01         02         03         04         05         06         07         08         09         10         11
Window 6         Window Left Wall 2         Left         90         1         7.5         0.3         NFRC         0.23         NFRC         Bug Screen         Altered         No           Window - SGD 3         Window         Rear Wall 2         Back         180         1         40         1.19         Table 110.6-A         0.83         Table 110.6-B         Bug Screen         Existing         No	Exterior Finish: 3 Coat Stucco  Inside Finish: Gypsum Board	Quality Insulation Installation (QII) High R-value Spray Foam Insulation Building Envelope Air Leakage CFM50	Use the Heating Cooling Required Verified Heating Cooling
Window - SGD 4 Window Front Wall 3 Front 0 1 34 0.3 NFRC 0.23 NFRC Bug Screen New n/a	R-15 Wall Exterior Walls Wood Framed Wall 2x4 @ 16 in. O. C. R-15 None / None 0.095 Cavity / Frame: R-15 / 2x4 Exterior Finish: 3 Coat Stucco	Not Required Not Required n/a	Name System Type Peating Unit Name Name System Type Sy
Window 7         Window Mindow         Left Wall 3         Left         90         1         22         0.3         NFRC         0.23         NFRC         Bug Screen         New         n/a           Window 8         Window Right Wall 3         Right Wall 3         270         1         7.5         0.3         NFRC         0.23         NFRC         Bug Screen         New         n/a	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood	WATER HEATING SYSTEMS  01 02 03 04 05 06 07 08 09 10	HVAC System1 Heating and cooling system other Component Component HVAC Fan 1 Distribution n/a Existing No 1 1
Window 9         Window Right Wall 3         Right         270         1         7.5         0.3         NFRC         0.23         NFRC         Bug Screen         New         n/a	R-0 Roof No Attic Cathedral Ceilings Wood Framed Ceiling Cathedral Ceiling 2x4 @ 16 in. O. C. R-0 None None 0.484 Siding/sheathing/decking Cavity / Frame: no insul. / 2x4	Name System Type Distribution Type Water Heater Name (#) Solar Heating Compact HERS Verification Status Existing Water	1 1 System 1
OPAQUE DOORS         01         02         03         04         05         06	Inside Finish: Gypsum Board  Inside Finish: Gypsum Board	System Distribution Distribution Distribution System Distribution System System	HVAC - HEATING UNIT TYPES
Name Side of Building Area (ft <sup>2</sup> ) U-factor Status Verified Existing Condition	R-0 Wall1 Interior Walls Wood Framed Wall 2x4 @ 16 in. O. C. R-0 None 0.277 Cavity / Frame: no insul. / 2x4 Other Side Finish: Gypsum Board	DHW Sys 1 Domestic Hot Water (DHW) System Standard Distribution DHW Heater 1 (1) n/a None n/a Existing No	Name System Type Number of Units Heating Efficiency
Door     Front Wall     20     0.5     Existing     No       Door 2     Interior Surface     18     0.5     Existing     No	Attic RoofExisting Living Attic Roofs  Wood Framed  2x4 @ 24 in. O. C.  R-0  None / None  0.644  Roofing: Light Roof (Asphalt Shingle)  Roof Deck: Wood  Roof Deck: Wood  Roof Deck: Wood	уузсен	Heating Component 1 Central gas furnace 1 AFUE-80
	Area Ceiling Ceiling Siding/sheathing/decking Cavity / Frame: no insul. / 2x4		
Registration Number: Registration Date/Time: HERS Provider:	Registration Number: Registration Date/Time: HERS Provider:	Registration Number: Registration Date/Time: HERS Provider:	Registration Number: Registration Date/Time: HERS Provider:
CA Building Energy Efficiency Standards - 2019 Residential Compliance Report Version: 2019.1.300 Report Generated: 2021-04-20 13:15:34 Schema Version: rev 20200901	CA Building Energy Efficiency Standards - 2019 Residential Compliance Report Version: 2019.1.300 Report Generated: 2021-04-20 13:15:34  Schema Version: rev 20200901	CA Building Energy Efficiency Standards - 2019 Residential Compliance Report Version: 2019.1.300 Report Generated: 2021-04-20 13:15:34  Schema Version: rev 20200901	CA Building Energy Efficiency Standards - 2019 Residential Compliance Report Version: 2019.1.300 Report Generated: 2021-04-20 13:15:34  Schema Version: rev 20200901
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Project Name: Altura Vista AdditionCalculation Date/Time: 2021-04-20T13:15:05-07:00(Page 9 of 10)Calculation Description: Title 24 AnalysisInput File Name: Altura Vista Addition (202).ribd19x	Project Name: Altura Vista AdditionCalculation Date/Time: 2021-04-20T13:15:05-07:00(Page 10 of 10)Calculation Description: Title 24 AnalysisInput File Name: Altura Vista Addition (202).ribd19x		
HVAC - COOLING UNIT TYPES	DOCUMENTATION AUTHOR'S DECLARATION STATEMENT  1. I certify that this Certificate of Compliance documentation is accurate and complete.		
01 02 03 04 05 06 07 08  Name System Type Number of Units Efficiency EER/CEER Efficiency SEER Zonally Controlled Mulit-speed HERS Verification	Documentation Author Name: Documentation Author Signature:		
Cooling Component 1 Central split AC 1 11.7 14 Not Zonal Single Speed 1 hors good	Timothy Carstairs, CEA, HERS, GPR  Company:  Signature Date: 4/20/2021		
HVAC - DISTRIBUTION SYSTEMS	Carstairs Energy Inc.  Address:  CEA/ HERS Certification Identification (If applicable):  CEA/ HERS Certification Identification (If applicable):  CENTERED ENERGY ANALYST		
01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16	2238 Bayview Heights Drive, Suite E R16-06-10042  City/State/Zip: Phone:		
Duct Ins. R-value Duct Location Surface Area  Name Type Design Supply Return Supply Return Supply Return Supply Return Duct Location Surface Area  New Duct HERS Status Existing Distribution Of Surface Area	Los Osos, CA 93402 (805) 904-9048  RESPONSIBLE PERSON'S DECLARATION STATEMENT		
Name Type Supply Return Supply	I certify the following under penalty of perjury, under the laws of the State of California:  1. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design identified on this Certificate of Compliance.  2. I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.		
Air Distributi On attic Verified R-6 R-6 Attic Attic n/a n/a Bypass (not no system on attic Verified No n/a n/a n/a Bypass (not no system on syste	3. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.		
on attic Verified N-6 Attic Attic Attic Duct Specified 5 System 1 System 1 Specified 1-hers-dist New No 11/4 11/4 11/4 Specified 1-hers-dist	Responsible Designer Name:  ALEXANDER ANGKAWIJAYA  Responsible Designer Signature:  ALEXANDER ANGKAWIJAYA		
HVAC FAN SYSTEMS - HERS VERIFICATION	Company: Date Signed: 04/20/2021		
01 02 03  Name Verified Fan Watt Draw Required Fan Efficacy (Watts/CFM)	Address: License:		
HVAC Fan 1-hers-fan Not Required 0	City/State/Zip:  DANVILLE/ CA/ 94526  Phone:		
HERS RATER VERIFICATION OF EXISTING CONDITIONS			
Registration Number: Registration Date/Time: HERS Provider:  CA Building Energy Efficiency Standards - 2019 Residential Compliance Report Version: 2019.1.300 Report Generated: 2021-04-20 13:15:34	Registration Number: Registration Date/Time: HERS Provider:  CA Building Energy Efficiency Standards - 2019 Residential Compliance Report Version: 2019.1.300 Report Generated: 2021-04-20 13:15:34		
Schema Version: rev 20200901	Schema Version: rev 20200901		

CF1R-PRF-01E

CERTIFICATE OF COMPLIANCE

CF1R-PRF-01E

CERTIFICATE OF COMPLIANCE

CERTIFICATE OF COMPLIANCE

CF1R-PRF-01E

CERTIFICATE OF COMPLIANCE

TOWN HOUSE

202 ALTURA VISTA, LOS ALTOS, CA 95032 PROJECT

> **ADDITION &** REMODEL

> > AA HOME DESIGN & BUILD LLC

> > > DESIGN SERVICES

T: 408.431.2952 AA.HomeDesignBuild @gmail.com

> TITLE 24 REPORTS

SHEET TITLE

REVISION

DATE 05.05.21 DRAWN AA SCALE AS SHOWN

SHEET

EN-1

PROJECT: Altura Vista Addition 202 Altura Vista Los Gatos, CA 95032 **Project Designer:** Report Prepared by: Timothy Carstairs, CEA, HERS, GPR Carstairs Energy Inc. 2238 Bayview Heights Drive, Suite E Los Osos, CA 93402 (805) 904-9048 Job Number: 21-042012 Date: 4/20/2021 he EnergyPro computer program has been used to perform the calculations summarized in this compliance report. This program has approval and authorized by the California Energy Commission for use with both the Residential and Nonresidential 2019 Building Energy Efficiency Standard This program developed by EnergySoft Software – www.energysoft.com.

2019 Low-Rise Residential Mandatory Measures Summary

TE: Low-rise residential buildings subject to the Energy Standards must comply with all applicable mandatory measures, regardless of the compliance approach

when tested per NFRC-400, ASTM E283 or AAMA/WDMA/CSA 101/I.S.2/A440-2011.\*

110.6-A, 110.6-B, or JA4.5 for exterior doors. They must be caulked and/or weather-stripped."

to placing insulation either above or below the roof deck or on top of a drywall ceiling.\*

Loose-fill Insulation. Loose fill insulation must meet the manufacturer's required density for the labeled R-value

Raised-floor Insulation. Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor.

JV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).

maximum U-factor of 0.58; or the weighted average U-factor of all fenestration must not exceed 0.58.\*

and is equipped with a readily accessible, operable, and tight-fitting damper or combustion-air control device.\*

Space Conditioning, Water Heating, and Plumbing System Measures:

Certification. Heating, ventilation and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated

HVAC Efficiency. Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-K.

Flue Damper. Masonry or factory-built fireplaces must have a flue damper with a readily accessible control.

Pilot Light. Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.

compression heating is higher than the cut-off temperature for supplementary heating."

Manual; or the ACCA Manual J using design conditions specified in § 150.0(h)2.

§ 110.0-§ 110.3: Sentince must be certified by the manufacturer to the California Energy Commission.\*

Labeling. Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a)

Air Leakage. Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 CFM per square foot or less

Field fabricated exterior doors and fenestration products must use U-factors and solar heat gain coefficient (SHGC) values from Tables

Air Leakage. All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked,

Insulation Certification by Manufacturers. Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods

Roofing Products Solar Reflectance and Thermal Emittance. The thermal emittance and aged solar reflectance values of the roofing

material must meet the requirements of § 110.8(i) and be labeled per §10-113 when the installation of a cool roof is specified on the CF1R.

Radiant Barrier. When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affai

Minimum R-19 or weighted average U-factor of 0.054 or less in a rafter roof alteration. Attic access doors must have permanently attached

insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a continuous roof or ceiling which is sealed to limit infiltration and exfiltration as specified in § 110.7, including but not limited.

Wall Insulation. Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or

Slab Edge Insulation. Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without

facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per inch; be protected from physical damage and

Vapor Retarder. In climate zones 1 through 16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor

insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation.

Fenestration Products. Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a

retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to § 150.0(d).

Vapor Retarder. In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all

Closable Doors. Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.

Combustion Intake. Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in are

Controls for Heat Pumps with Supplementary Electric Resistance Heaters. Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the

cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for

Water Heating Recirculation Loops Serving Multiple Dwelling Units. Water heating recirculation loops serving multiple dwelling units must

Isolation Valves. Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with hos

Pilot Lights. Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces; household cooking appliances (excep

appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour); and pool and spa heater

Building Cooling and Heating Loads. Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfort System Installation Standards

meet the air release valve, backflow prevention, pump priming, pump isolation valve, and recirculation loop connection requirements of

Thermostats. All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a

bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.

have a U-factor of 0.071 or less. Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls

Ceiling and Rafter Roof Insulation. Minimum R-22 insulation in wood-frame ceiling; or the weighted average U-factor must not exceed 0.043.

Insulation Requirements for Heated Slab Floors. Heated slab floors must be insulated per the requirements of § 110.8(g).

used. Review the respective section for more information. \*Exceptions may apply.

gasketed, or weather stripped.

Fireplaces, Decorative Gas Appliances, and Gas Log Measures:

setback thermostat.\*

and Services (BHGS).

Building Envelope Measures:

§ 110.8(a):

§ 110.8(g):

§ 110.8(j):

§ 150.0(c):

§ 150.0(f):

§ 150.0(g)2:

§ 150.0(q):

§ 150.0(e)2:

§ 110.2(b):

§ 110.2(c):

§ 110.3(c)4:

§ 110.3(c)6:

§ 150.0(h)1:

**BUILDING ENERGY ANALYSIS REPORT** 

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Room Load Summary 20

	DENTIAL	MEAS	URES S	UMM	ARY						RMS-1
Project N A <i>ltura</i> N					ding Type		gle Fami ti Family		Addition Alone Existing+ Additior	n/Alteration	Date 4/20/202
Project A	ddress			Cali	fornia Ene	rgy Clima	te Zone	Total	Cond. Floor Area	Addition	# of Units
202 Alt	ura Vista Lo	s Gatos		C	A Clima	ate Zon	e 04		2,525	417	1
NSUL	.ATION					Area					
Const	ruction Ty	ре		Cav	rity	(ft <sup>2</sup> )	S	peci	al Features		Status
Vall	Wood Framed			- no in	sulation	2					Existing
Door	Opaque Door			- no in	sulation	20					Existing
Vall	Wood Framed			- no in	sulation	424					Existing
Vall	Wood Framed			- no in	sulation	129					Existing
Vall	Wood Framed				sulation	395					Existing
Roof	Wood Framed A	Attic		R 11		246					Existing
Slab	Unheated Slab-	on-Grade			sulation	1,177	Perim :	= 141'			Existing
emising	Wood Framed			- no in	sulation	150					Existing
	STRATION	2	Total Area:	308	Glazing	Percenta	90.	2.2 %	New/Altered Avera		0.30
Orient	tation Are	a(ft⁻)	U-Fac	SHGC	Overl	nang	Sidef	ins	Exterior Sha	ades	Status
ront (N)		18.0	1.190	0.83	none		none		N/A		Existing
Rear (S)		127.0	1.190	0.83	none		none		N/A		Existing
Right (W)		53.0	1.190	0.83	none		none		N/A		Existing
.eft (E)		39.0	0.300	0.23	none		none		N/A		Altered
ront (N)		34.0	0.300	0.23	none		none		N/A		New
.eft (E)		22.0	0.300	0.23	none		none		N/A		New
Right (W)		15.0	0.300	0.23	none		none		N/A		New
	SYSTEMS Heating		Min. Ef	f Co	oling		Min	. Eff	Ther	mostat	Status
						ditioner				mostat	Status Existing
Qty.	Heating Central Furnace DISTRIBUT		80% AFUE	E Spl	it Air Cond		14.0	SEER	Setback	uct	
Qty.	Heating Central Furnace DISTRIBUT			E Spl	it Air Cond		14.0	SEER	Setback	uct	
Qty.  1  HVAC Locat	Heating Central Furnace DISTRIBUT		80% AFUE	E Spi	it Air Cond		14.0	SEER	Setback D R	uct -Value	Existing
Qty.  1  HVAC Locat	Heating Central Furnace DISTRIBUT	Hea	80% AFUE	E Spi	it Air Cond	Duc	14.0	SEER	Setback D R	uct -Value	Existing Status
Qty.  1  HVAC Locati	Heating Central Furnace  DISTRIBUT ion stem	Hea Ducted	80% AFUE	E Spi	it Air Cond	Duc	14.0	SEER	Setback D R	uct -Value	Existing Status
Qty.  1  HVAC Locati	Heating Central Furnace  DISTRIBUT ion stern	Hea Ducted	80% AFUL	Co Duc	oling	<b>Duc</b> Attic	14.0	ation	Setback  D R	uct -Value	Status Altered
Qty.	Heating Central Furnace DISTRIBUT	Hea	ıti	80% AFUE	80% AFUE Spl	80% AFUE Split Air Cond	80% AFUE Split Air Conditioner	80% AFUE Split Air Conditioner 14.0	80% AFUE Split Air Conditioner 14.0 SEER	80% AFUE Split Air Conditioner 14.0 SEER Setback  Ding Cooling Duct Location R	80% AFUE Split Air Conditioner 14.0 SEER Setback  Duct ng Cooling Duct Location R-Value
IVAC .ocati	Heating Central Furnace  DISTRIBUT ion stern	Hea Ducted	80% AFUL	E Spi	it Air Cond	<b>Duc</b> Attic	14.0	ation	Setback  D R	uct -Value	Existing Status
Qty.  1  HVAC Locati	Heating Central Furnace  DISTRIBUT ion stern	Hea Ducted	80% AFUL	Co Duc	oling	<b>Duc</b> Attic	14.0	ation	Setback  D R	uct -Value	Status Altered
Qty.  1  HVAC Locati HVAC Sy. WATE Qty.	Heating Central Furnace  DISTRIBUT ion stern	Hea Ducted	80% AFUL	Co Duc	oling	<b>Duc</b> Attic	14.0	ation	Setback  D R	uct -Value	Status Altered

	<b>IDENTI</b>	<u></u>	OILE O	TIAIIAIV I					RMS-1
	Vista Addi	tion		Building Type	☑ Single F □ Multi Fa		ddition Alone xisting+ Additior	n/Alteration	Date 4/20/202
Project A					ergy Climate Zo	l l	ond. Floor Area	Addition	# of Units
		Los Gatos		CA Clim	ate Zone 0	)4	2,525	417	1
	LATION	_			Area	_			
Cons	truction	Туре		Cavity	(ft <sup>2</sup> )	Specia	l Features		Status
Nall	Wood Frai	med		- no insulation	72				Existing
Wall	Wood Frai	med		- no insulation	385				Existing
Wall	Wood Frai	med		- no insulation	176				Existing
Wall	Wood Frai			- no insulation	272				Existing
Roof	Wood Frai			R 11	931				Existing
Wall	Wood Frai			R 15	134				New
Wall	Wood Frai			R 15	82				New
Nall	Wood Frai			R 15	32				New
	STRATIC		Total Area:	308 Glazing		12.2 % N	lew/Altered Avera		0.30
Orien	tation A	Area(ft²)	U-Fac SI	HGC Overl	nang Sid	defins E	Exterior Sha	ades	Status
HVAC	C SYSTEI	WS							
	SYSTEI Heating	иѕ	Min. Eff	Cooling	1	Min. Eff	Ther	mostat	Status
		WS	Min. Eff	Cooling		Min. Eff	Ther	mostat	Status
		MS	Min. Eff	Cooling	ľ	Min. Eff	Ther	rmostat	Status
		MS	Min. Eff	Cooling	ſ	Min. Eff	Ther	mostat	Status
Qty.			Min. Eff	Cooling	ı	Min. Eff		mostat	Status
Qty.	Heating  DISTRIE	BUTION	Min. Eff	Cooling		Min. Eff	D		Status
Qty.	Heating  DISTRIE	BUTION					D	uct	
Qty.	Heating  DISTRIE	BUTION					D	uct	
Qty.	Heating  DISTRIE	BUTION					D	uct	
Qty.	Heating  DISTRIE	BUTION Hea	iting	Cooling			D	uct	
Qty. HVAC	Heating  DISTRII	BUTION Hea		Cooling	Duct L		D R	uct	
Qty. HVAC	Heating  DISTRIFT  CONTROL  CO	BUTION Hea	iting	Cooling	Duct L	ocation	D R	uct	Status
Qty. HVAC	Heating  DISTRIFT  CONTROL  CO	BUTION Hea	iting	Cooling	Duct L	ocation	D R	uct	Status
Qty. HVAC	Heating  DISTRIFT  CONTROL  CO	BUTION Hea	iting	Cooling	Duct L	ocation	D R	uct	Status
Qty. HVAC	Heating  DISTRIFT  CONTROL  CO	BUTION Hea	iting	Cooling	Duct L	ocation	D R	uct	Status

RESIDENTIAL N	ILAJUKL			☑ Sipala Fan	aily 🗖	Addition Alone		RMS-1
Altura Vista Addition		Bu	ilding Type	☐ Multi Fami		Addition Alone Existing+ Additio	n/Alteration	4/20/202
Project Address		<b>I</b>		rgy Climate Zone	Total	Cond. Floor Area	Addition	# of Units
202 Altura Vista Los	Gatos			ate Zone 04		2,525	417	1
INSULATION	_	_		Area		-1.51		04-4
Construction Typ	e		vity	• •	peci	al Features		Status
Wall Wood Framed		R 15		305				New
Roof Wood Framed Att Demising Wood Framed	ric	R 30	nsulation	200				New
Domining Wood Marined		770	<i>Todiation</i>	200				
FENESTRATION	Total	Area: 30	08 Glazing	Percentage:	12.2 %	New/Altered Avera	age U-Factor:	0.30
Orientation Area	$(ft^2)$ U-Fa					Exterior Sh		Status
HVAC SYSTEMS Qty. Heating	Mir	n. Eff C	ooling	Mi	n. Efl	f The	rmostat	Status
HVAC SYSTEMS Qty. Heating HVAC DISTRIBUTI Location			ooling	Mi Duct Loc			rmostat Duct R-Value	Status
Qty. Heating  HVAC DISTRIBUTI	ON			Duct Loc	atior	n F	Duct	

TOWN HOUSE

202 ALTURA VISTA, LOS ALTOS, CA 95032

ADDITION & REMODEL

AA HOME DESIGN & BUILD LLC

> DESIGN SERVICES

T: 408.431.2952 AA.HomeDesignBuild @gmail.com

> TITLE 24 REPORTS

SHEET TITLE

DATE 05.05.21

DRAWN AA

SCALE AS SHOWN

SHEET

EN-2
OF 13 SHEETS

2019 Low-Rise Residential Mandatory Measures Summary Clearances. Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any dryer Liquid Line Drier. Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the § 150.0(h)3B: Storage Tank Insulation. Unfired hot water tanks, such as storage tanks and backup storage tanks for solar water-heating systems, must have a minimum of R-12 external insulation or R-16 internal insulation where the internal insulation R-value is indicated on the exterior of the tank. Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation. All domestic hot water piping must be insulated as specified in Section 609.11 of the California Plumbing Code. In addition, the following piping conditions must have a minimum insulation wall thickness of one inch or a minimum insulation R-value of 7.7: the first five feet of cold water pipes from the storage tank; all hot § 150.0(j)2A: water piping with a nominal diameter equal to or greater than 3/4 inch and less than one inch; all hot water piping with a nominal diameter less than 3/4 inch that is: associated with a domestic hot water recirculation system, from the heating source to storage tank or between tanks, buried below grade, and from the heating source to kitchen fixtures.\* Insulation Protection. Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind as required by Section 120.3(b). Insulation exposed to weather must be water retardant and protected from LIV light (no adhesive tapes). Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-crushable casing or sleeve. Gas or Propane Water Heating Systems. Systems using gas or propane water heaters to serve individual dwelling units must include all of the following: A dedicated 125 volt, 20 amp electrical receptacle connected to the electric panel with a 120/240 volt 3 conductor, 10 AWG copper branch circuit, within three feet of the water heater without obstruction. Both ends of the unused conductor must be labeled with the word "spars" and be electrically isolated. Have a reserved single pole circuit breaker space in the electrical panel adjacent to the circuit breaker § 150.0(n)1: for the branch circuit and labeled with the words "Future 240V Use"; a Category III or IV vent, or a Type B vent with straight pipe between the outside termination and the space where the water heater is installed; a condensate drain that is no more than two inches higher than the base of the water heater, and allows natural draining without pump assistance; and a gas supply line with a capacity of at least 200,000 Btu per hour. Recirculating Loops. Recirculating loops serving multiple dwelling units must meet the requirements of § 110.3(c)5. Solar Water-heating Systems. Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing § 150.0(n)3: agency that is approved by the Executive Director. Ducts. Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If a § 110.8(d)3: contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement. CMC Compliance. All air-distribution system ducts and plenums must meet the requirements of the CMC §§ 601.0, 602.0, 603.0, 604.0, 605.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to a minimum installed level of R-6.0 or a minimum installed level of R-4.2 when ducts are entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8). Portions of the duct system completely exposed and surrounded by directly conditioned space are not required to be insulated. Connections of metal ducts and linner core of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable requirements of UL § 150.0(m)1: 181, UL 181A, or UL 181B or aerosol sealant that meets the requirements of UL 723. If mastic or tape is used to seal openings greater than ¼ inch, the combination of mastic and either mesh or tape must be used. Building cavities, support platforms for air handlers, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts. Ducts installed in cavities and support platforms must not be compressed to cause Factory-Fabricated Duct Systems. Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands. § 150.0(m)2: Field-Fabricated Duct Systems. Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, § 150.0(m)3: mastics, sealants, and other requirements specified for duct construction. Backdraft Damper. Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers. § 150.0(m)7: Gravity Ventilation Dampers. Gravity ventilating systems serving conditioned space must have either automatic or readily accessible. § 150.0(m)8: manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents. Protection of Insulation. Insulation must be protected from damage, sunlight, moisture, equipment maintenance, and wind. Insulation exposed § 150.0(m)9: to weather must be suitable for outdoor service. For example, protected by aluminum, sheet metal, painted canvas, or plastic cover, Cellular

foam insulation must be protected as above or painted with a coating that is water retardant and provides shielding from solar radiation.

Porous Inner Core Flex Duct. Porous inner core flex ducts must have a non-porous layer between the inner core and outer vapor barrier.

Duct System Sealing and Leakage Test. When space conditioning systems use forced air duct systems to supply conditioned air to an

Air Filtration. Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or

equivalent filters. Filters for space conditioning systems must have a two inch depth or can be one inch if sized per Equation 150.0-A. Pressure

Space Conditioning System Airflow Rate and Fan Efficacy. Space conditioning systems that use ducts to supply cooling must have a hole

for the placement of a static pressure probe, or a permanently installed static pressure probe in the supply plenum. Airflow must be ≥ 350 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.45 watts per CFM for gas furnace air handlers and ≤ 0.58 watts per

unit fan efficacy ≤ 0.62 watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3.\*

CFM for all others. Small duct high velocity systems must provide an airflow ≥ 250 CFM per ton of nominal cooling capacity, and an air-handling

occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with § 150.0(m)11 and Reference Residential Appendix RA3.

drops and labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service.\*

§ 150.0(m)10:

§ 150.0(m)13:

2019 Low-Rise Residential Mandatory Measures Summary Requirements for Ventilation and Indoor Air Quality: Requirements for Ventilation and Indoor Air Quality. All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 150.0(o)1. Single Family Detached Dwelling Units. Single family detached dwelling units, and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow provided at rates determined by ASHRAE 62.2 Sections 4.1.1 and 4.1.2 and as specified in § 150.0(o)1C. Multifamily Attached Dwelling Units. Multifamily attached dwelling units must have mechanical ventilation airflow provided at rates in accordance with Equation 150.0-B and must be either a balanced system or continuous supply or continuous exhaust system. If a balanced § 150.0(o)1E: system is not used, all units in the building must use the same system type and the dwelling-unit envelope leakage must be ≤ 0.3 CFM at 50 Pa 0.2 inch water) per square foot of dwelling unit envelope surface area and verified in accordance with Reference Residential Appendix RA3.8. Multifamily Building Central Ventilation Systems. Central ventilation systems that serve multiple dwelling units must be balanced to provide ventilation airflow for each dwelling unit served at a rate equal to or greater than the rate specified by Equation 150.0-B. All unit airflows must be within 20 percent of the unit with the lowest airflow rate as it relates to the individual unit's minimum required airflow rate needed for compliance. § 150.0(o)1G: Kitchen Range Hoods. Kitchen range hoods must be rated for sound in accordance with Section 7.2 of ASHRAE 62.2. Field Verification and Diagnostic Testing. Dwelling unit ventilation airflow must be verified in accordance with Reference Residential Appendix RA3.7. A kitchen range hood must be verified in accordance with Reference Residential Appendix RA3.7.4.3 to confirm it is § 150.0(o)2: rated by HVI to comply with the airflow rates and sound requirements as specified in Section 5 and 7.2 of ASHRAE 62.2. Pool and Spa Systems and Equipment Measures: Certification by Manufacturers. Any pool or spa heating system or equipment must be certified to have all of the following: a thermal efficien that complies with the Appliance Efficiency Regulations; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and must not use electric Piping. Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating. § 110.4(b)2: **Covers.** Outdoor pools or spas that have a heat pump or gas heater must have a cover. Directional Inlets and Time Switches for Pools. Pools must have directional inlets that adequately mix the pool water, and a time switch that § 110.4(b)3: will allow all pumps to be set or programmed to run only during off-peak electric demand periods. Pilot Light. Natural gas pool and spa heaters must not have a continuously burning pilot light. Pool Systems and Equipment Installation. Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves.\* Lighting Controls and Components. All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9.\* § 150.0(k)1A: Luminaire Efficacy. All installed luminaires must meet the requirements in Table 150.0-A Blank Electrical Boxes. The number of electrical boxes that are more than five feet above the finished floor and do not contain a luminaire or § 150.0(k)1B: other device must be no greater than the number of bedrooms. These electrical boxes must be served by a dimmer, vacancy sensor control, or Recessed Downlight Luminaires in Ceilings. Luminaires recessed into ceilings must meet all of the requirements for: insulation contact (IC) labeling; air leakage; sealing; maintenance; and socket and light source as described in § 150.0(k)1C. Electronic Ballasts for Fluorescent Lamps. Ballasts for fluorescent lamps rated 13 watts or greater must be electronic and must have an Night Lights, Step Lights, and Path Lights. Night lights, step lights and path lights are not required to comply with Table 150.0-A or be § 150.0(k)1E: ntrolled by vacancy sensors provided they are rated to consume no more than 5 watts of power and emit no more than 150 lumens. Lighting Integral to Exhaust Fans. Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) § 150.0(k)1F: must meet the applicable requirements of § 150.0(k).\* § 150.0(k)1G: Screw based luminaires. Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8.\* Light Sources in Enclosed or Recessed Luminaires. Lamps and other separable light sources that are not compliant with the JA8 elevated § 150.0(k)1H: emperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires Light Sources in Drawers, Cabinets, and Linen Closets. Light sources internal to drawers, cabinetry or linen closets are not required to § 150.0(k)1I: comply with Table 150.0-A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed Interior Switches and Controls. All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A. Interior Switches and Controls. Exhaust fans must be controlled separately from lighting systems.\* § 150.0(k)2B: Interior Switches and Controls. Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually § 150.0(k)2C: turned ON and OFF.\* § 150.0(k)2D: Interior Switches and Controls. Controls and equipment must be installed in accordance with manufacturer's instructions Interior Switches and Controls. Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the control is installed to § 150.0(k)2E: comply with § 150.0(k). § 150.0(k)2F: Interior Switches and Controls. Lighting controls must comply with the applicable requirements of § 110.9.

2019 Low-Rise Residential Mandatory Measures Summary **Interior Switches and Controls.** An energy management control system (EMCS) may be used to comply with control requirements § 150.0(k)2G: provides functionality of the specified control according to § 110.9; meets the Installation Certificate requirements of § 130.4; meets the EMCS requirements of § 130.0(e); and meets all other requirements in § 150.0(k)2. Interior Switches and Controls. A multiscene programmable controller may be used to comply with dimmer requirements in § 150.0(k) if it provides the functionality of a dimmer according to § 110.9, and complies with all other applicable requirements in § 150.0(k)2. § 150.0(k)2H: Interior Switches and Controls. In bathrooms, garages, laundry rooms, and utility rooms, at least one luminaire in each of these spaces must be controlled by an occupant sensor or a vacancy sensor providing automatic-off functionality. If an occupant sensor is installed, it must be § 150.0(k)2I: initially configured to manual-on operation using the manual control required under Section 150.0(k)2C. Interior Switches and Controls. Luminaires that are or contain light sources that meet Reference Joint Appendix JA8 requirements for § 150.0(k)2J: dimming, and that are not controlled by occupancy or vacancy sensors, must have dimming controls,\* Interior Switches and Controls. Under cabinet lighting must be controlled separately from ceiling-installed lighting systems. § 150.0(k)2K: Residential Outdoor Lighting. For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must meet the requirement in item § 150.0(k)3Ai (ON and OFF switch) and the requirements in either 150.0(k)3Aii (photocell and either a motion sensor or automatic time switch control) or § 150.0(k)3Aii (astronomical time clock), or an EMCS. esidential Outdoor Lighting. For low-rise residential buildings with four or more dwelling units, outdoor lighting for private patios, entrances § 150.0(k)3B: balconies, and porches; and residential parking lots and carports with less than eight vehicles per site must comply with either § 150.0(k)3A or with the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0. Residential Outdoor Lighting. For low-rise residential buildings with four or more dwelling units, any outdoor lighting for residential parking lots or carports with a total of eight or more vehicles per site and any outdoor lighting not regulated by § 150.0(k)3B or § 150.0(k)3D must comply with § 150.0(k)3C: the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0. Internally illuminated address signs. Internally illuminated address signs must comply with § 140.8; or must consume no more than 5 watts of § 150.0(k)4: power as determined according to § 130.0(c).

Residential Garages for Eight or More Vehicles. Lighting for residential parking garages for eight or more vehicles must comply with the § 150.0(k)5: applicable requirements for nonresidential garages in Sections 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.

Interior Common Areas of Low-rise Multifamily Residential Buildings. In a low-rise multifamily residential building where the total interior common area in a single building equals 20 percent or less of the floor area, permanently installed lighting for the interior common areas in that building must be comply with Table 150.0-A and be controlled by an occupant sensor. § 150.0(k)6A: Interior Common Areas of Low-rise Multifamily Residential Buildings. In a low-rise multifamily residential building where the total interior common area in a single building equals more than 20 percent of the floor area, permanently installed lighting for the interior common areas in § 150.0(k)6B: i. Comply with the applicable requirements in Sections 110.9, 130.0, 130.1, 140.6 and 141.0; and i. Lighting installed in corridors and stairwells must be controlled by occupant sensors that reduce the lighting power in each space by at least 50 percent. The occupant sensors must be capable of turning the light fully on and off from all designed paths of ingress and egress. ingle Family Residences. Single family residences located in subdivisions with 10 or more single family residences and where the application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which do not have a photovoltaic system installed, must comply with the requirements of § 110.10(b) through § 110.10(e). § 110.10(a)1: Low-rise Multifamily Buildings. Low-rise multi-family buildings that do not have a photovoltaic system installed must comply with the requirements of § 110.10(b) through § 110.10(d). § 110.10(a)2: Minimum Solar Zone Area. The solar zone must have a minimum total area as described below. The solar zone must comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24 or in any requirements adopted be a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single family residences, the solar zone must be located on the roof or overhang of the building § 110.10(b)1: and have a total area no less than 250 square feet. For low-rise multi-family buildings the solar zone must be located on the roof or overhang of ne building, or on the roof or overhang of another structure located within 250 feet of the building, or on covered parking installed with the building project, and have a total area no less than 15 percent of the total roof area of the building excluding any skylight area. The solar zone requirement is applicable to the entire building, including mixed occupancy.\* Azimuth. All sections of the solar zone located on steep-sloped roofs must be oriented between 90 degrees and 300 degrees of true north. Shading. The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof § 110.10(b)3A: mounted equipment.\* Shading. Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the § 110.10(b)3B: distance, measured in the horizontal plane, of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane.\* Structural Design Loads on Construction Documents. For areas of the roof designated as a solar zone, the structural design loads for roof § 110.10(b)4: dead load and roof live load must be clearly indicated on the construction documents. Interconnection Pathways. The construction documents must indicate: a location reserved for inverters and metering equipment and a § 110.10(c): pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system.

Documentation. A copy of the construction documents or a comparable document indicating the information from § 110.10(b) through § 110.10(c) must be provided to the occupant. § 110.10(e)1: Main Electrical Service Panel. The main electrical service panel must have a minimum busbar rating of 200 amps. Main Electrical Service Panel. The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric". § 110.10(e)2:

ROOM LOAD SUMMARY 4/20/2021 Altura Vista Addition 2,525 HVAC System ROOM LOAD SUMMARY ROOM COOLING PEAK | COIL COOLING PEAK | COIL HTG. PEAK Zone Name Room Name Mult. CFM Sensible Latent CFM Sensible Latent CFM Sensible 
 SFM
 Sension
 2

 875
 18,007
 323
 F

 587
 12,080
 256
 875 18,007 Existing 1st Floor isting Living Area 587 12,080 Existing 2nd Floor 3,532 115 172 3,532 New Living Area 2nd Floor Addition 
 PAGE TOTAL
 1,634
 33,619
 694
 1,498
 56,659

 TOTAL \*
 1,634
 33,619
 694
 1,498
 56,659
 \* Total includes ventilation load for zonal systems.

# GENERAL CRITERIA

APPLYING TO ALL STRUCTURAL FEATURES UNLESS OTHERWISE SHOWN OR NOTED.

### 1. GENERAL

- A. WHERE PUBLIC UTILITY LINES OR EQUIPMENT MUST BE REMOVED, AND/OR RELOCATED, OBTAIN THE NECESSARY APPROVALS FROM WATER AND POWER DEPARTMENT PRIOR TO STARTING WORK.
- B. NECESSARY PERMITS FROM PUBLIC WORKS SHALL BE SECURED AND NECESSARY BARRIERS, PROTECTION FENCES, AND/OR CANOPIES SHALL BE ERECTED ALONG PUBLIC WAYS PRIOR TO STARTING CONSTRUCTION.
- C. SEPARATE MECHANICAL PERMIT SHALL BE SECURED FOR ALL ELECTRICAL, PLUMBING, AND HEATING—VENTILATING WORK.
- D. STRUCTURAL ELEMENTS (INCLUDING WALLS AND FOOTINGS) WHICH PROJECT INTO PUBLIC PROPERTY REQUIRE PUBLIC WORKS APPROVAL PRIOR TO ISSUANCE OF BUILDING PERMIT.
- E. BREAKS IN ROOFING SHALL BE PATCHED.
- F. PLANS AND DETAILS WERE DEVELOPED BASED UPON A FIELD INVESTIGATION BY THE RESPONSIBLE ARCHITECT/ENGINEER AND REFLECT THE APPROXIMATE ACTUAL CONDITIONS OF THE BUILDING. ALL DIMENSIONS SHALL BE FIELD VERIFIED.
- G. BUILDING SHALL NOT BE OCCUPIED DURING REMODEL
  - WORK WHERE:

    1. THE BUILDING STRENGTH IS SUBSTANTIALLY WEAK @
  - AT ANY POINT DURING THE REMODEL WORK.

    2. REQUIRED EXITS ARE NOT AVAILABLE OR ARE OBSTRUCTED.
  - 3. REQUIRED FIRE SAFETY DEVICES, SUCH AS SPRINKLERS, STANDPIPES AND ALARM SYSTEM ARE NOT OPERATIONAL.

### 2. REFERENCE TO OTHER DRAWINGS

- A. SEE DRAWINGS OTHER THAN STRUCTURAL FOR: KINDS OF FLOOR FINISH AND THEIR LOCATION, FOR DEPRESSIONS IN FLOOR SLABS, FOR OPENINGS IN WALLS AND FLOORS REQUIRED BY ARCHITECTURAL AND MECHANICAL FEATURES, FOR ROADWAY PAVING, WALKS, RAMPS, STAIRS, CURBS, ETC.
- B. HOLES AND OPENINGS THROUGH WALLS, BEAMS AND FLOOR FOR ELEVATORS, DUCTS, PIPING AND VENTILATION SHALL BE CHECKED BY THE CONTRACTOR WHO SHALL VERIFY SIZES AND LOCATIONS OF SUCH HOLES OR OPENINGS WITH THE PLUMBING, HEATING, VENTILATING AND ELECTRICAL DRAWINGS AND THESE SUB—CONTRACTORS.

### 3. INTENT

IF CERTAIN FEATURES ARE NOT FULLY SHOWN OR CALLED FOR ON THE DRAWINGS OR SPECIFICATIONS, THEIR CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS FOR SIMILAR CONDITIONS THAT ARE SHOWN OR CALLED FOR.

# 4. DISCREPANCIES

THE CONTRACTOR SHALL COORDINATE STRUCTURAL DRAWINGS WITH OTHER DRAWINGS FOR INDIVIDUAL ITEMS. DISCREPANCIES UNCOVERED, IF ANY, SHALL BE REPORTED BEFORE PROCEEDING WITH THE WORK SO THAT PROPER ADJUSTMENT CAN BE MADE.

5. ALL NEW CONSTRUCTION MUST BE COORDINATED WITH EXISTING SITE CONDITIONS.

# 6. REINFORCING

- A. ALL REINFORCING STEEL SHALL BE GRADE 60 (FY = 60 KSI) FOR #4 AND LARGER, GRADE 40 FOR #3 AND SMALLER DEFORMED BARS, IN ACCORDANCE WITH ASTM A615 AND WITH DEFORMATIONS CONFORMING TO ASTM A305-56T. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185, UNLESS NOTED OTHERWISE. REINFORCING STEEL TO BE WELDED TO MEET ASTM A706 REQUIREMENTS
- B. ALL REINFORCEMENT SHALL BE CONTINUOUS. STAGGER SPLICES WHERE POSSIBLE. LAPS FOR SPLICES SHALL BE 48 DIAMETERS UNLESS OTHERWISE SHOWN OR NOTED.
- C. SUPPORT REINFORCEMENT IN ITS TRUE HORIZONTAL AND VERTICAL POSITION WITH DEVICES SUFFICIENTLY NUMEROUS TO PERMIT WALKING ON STEEL WITHOUT DISPLACEMENT.
- D. ALL REINFORCEMENT SHALL BE SECURELY WIRED TOGETHER IN FORMS.

  TWO WAY MATS OF STEEL SHALL BE TIED AT ALTERNATE INTERSECTIONS

  BOTH WAYS MINIMUM. WALL STEEL SPREADERS SHALL BE #3 BARS, 4'-0"

  EACH WAY MAXIMUM.
- E. TACK WELDING OF ANY REINFORCING IS NOT PERMITTED UNLESS SPECIFICALLY APPROVED BY THE STRUCTURAL ENGINEER IN WRITING.

	SEISMIC PARAMETERS												
Seismic Design Cat.	Occ Cat.	Site Class	R	SDS (g)	SD1 (g)	Р	Та	Ss (g)	S1 (g)	TL	Fa	Fy	Cs
E	II	D	6.5	1.909	0.86	1.40	0.175	2.386	0.86	8	1.00	1.50	0.206

1	WIND	PARAM	ETERS		
Wind Speed	Occ Cat.	Rough- ness	Expo- sure	lw	Topo Type
110	II	С	С	1.00	Flat

### 7. MINIMUM CONCRETE PROTECTION FOR REINFORCEMENT-CLEAR DISTANCE

A. FOOTINGS, TIE BEAMS, GRADE BEAMS, 3 INCHES SLABS ON GRADE

B. WALLS, PEDESTALS

2 INCHES AT FORMED FACE
AGAINST EARTH, OR WATER
1 1/2 INCHES AT EXTERIOR
FACE ABOVE GRADE
1 INCH AT INTERIOR FACE
ABOVE GRADE AT WALLS,
1 1/2" AT COLS AND BEAMS.

### 8. CONCRETE

- B. ALL CONCRETE SHALL BE REINFORCED UNLESS SPECIFICALLY MARKED "NOT REINFORCED".
- C. AGGREGATE SIZE 3/4" MAX EXCEPT AT FOOTINGS WHERE IT IS TO BE 1 1/2" MAX
- 9. TO OBVIATE SHRINKAGE, LIMIT SLAB-ON-GRADE POURS TO 3600 SQ.FT. AND WALLS TO 60' LENGTHS. POURS ON METAL DECK TO BE LIMITED TO AREAS 90' X 90'. SUBMIT LAYOUTS FOR APPROVAL PRIOR TO ALL POURS TO OWNER'S REPRESENTATIVE. CONTROL JOINTS SHALL OCCUR AT 20'-0" O.C. EACH WAY.
- 10. SLAB ON GRADE

SEE PLANS FOR SPECIFIC NOTES

### 11. <u>LUMBER</u>

- A. UNMANUFACTURED FRAMING LUMBER SHALL BE DOUGLAS FIR/LARCH NO. 2 OR NO. 1 AND GRADE PER PLAN MARKED PER WCLB SPECIFICATIONS. MANUFACTURED LUMBER SHALL BE PER "TRUSS JOIST McMILLIAN" AS DESIGNATED ON PLANS. ALL MEMBER ALL PSL MEMBER TO BE 2.0 E PARALLAM.
- B. STRUCTURAL PLYWOOD SHALL BE DOUGLAS FIR CONFORMING TO COMMERCIAL STANDARDS PSI-74, STRUCTURAL EXTERIOR TYPE GRADE C-D, GRADE STAMPED APA.
- C. NAILING SHALL CONFORM TO THE BUILDING CODE UNLESS OTHERWISE NOTED. SUBSTITUTIONS FOR FRAMING HARDWARE SHALL NOT BE USED UNLESS APPROVED BY THE ARCHITECT/ENGINEER.
- D. NO STRUCTURAL MEMBER SHALL BE CUT OR NOTCHED UNLESS SPECIFICALLY SHOWN, NOTED OR APPROVED BY THE ARCHITECT/ENGINEER.S
- . USE DOUBLE JOISTS UNDER WALLS OR PARTITIONS PARALLEL TO JOISTS. USE SOLID BLOCK UNDER PARTITIONS PERPENDICULAR TO JOISTS.
- F. MAXIMUM MOISTURE CONTENT SHALL NOT EXCEED 19% FOR UNMANUFACTURED ALL STRUCTURAL MEMBERS.
- G. PROVIDE WASHERS UNDER HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD.
- H. HARDWARE TO BE PER SIMPSON OR EQUIVALENT

# 11. <u>EPOXY SYSTEM</u>

PROVIDE SIMPSON SET-XP ADHESIVE SYSTEM FOR EPOXY ANCHOR (ICC-ESR 2508).

# 12. SOIL DESIGN PARAMETERS

- A.) ALLOWABLE FOUNDATION PRESSURE NOT TO EXCEED 1,500 PSF BEARING FOR ALL LOAD
- B.) PRESCRIPTIVE WIDTH AND THICKNESS OF FOOTING SHALL COMPLY WITH 2019 CBC CHAPTER 18

# DESIGN CRITERIA

THE FOLLOWING CRITERIA COVER THE STRUCTURAL DESIGN OF THIS BUILDING.

1 CODES

# A. 2019 CALIFORNIA BUILDING CODE.

DESIGN LOADS

A. DEAD LOADS — TYPICALLY AS FOLLOWING:

1.) ROOF: COMP. SHINGLES 3.0 PSF

2.) 1/2" PLYWOOD 1.5 PSF

3.) ROOF & CEIL'G FRAMING 3.0 PSF

4.) INSULATION

5.) GYP CEILING BOARD

6.) MISC.

7.) TOTAL ROOF DEAD LOAD:

13 PSF

10AL FLR DEAD

LOAD: 12 PSF

9.) INTERIOR WALL 8 PSF
B. LIVE LOADS — UNIFORM AS FOLLOWS:
1.) ROOFS 20 PSF

8.) EXTERIOR WALL

2.) TYPICAL FLOORS 40 PSF

# FASTENING SCHEDULE

2019 CALIFORNIA BUILDING CODE TABLE 2304.10.1

The following are general requirements of the fastening schedule based on the 2019 CA Building Code. This handout is intended to provide only general information, for further information contact the Building & Safety Division.

	ELEMENT/CONNECTI ON	FASTENER	LOCATION
		ROOF	
1.	Blocking between ceiling joists, rafters or trusses to top plate or other framing below	3 - 8d common $(2^1/2'' \times 0.131'')$ 3-10d box (3"x0.128") 3 - 3" × 0.131" nails 3 - 3" 14 gage staples, 7/16" crown	Toenail each end
	Blocking between rafters or truss not at the wall top plate, to rafter or truss	2 - 8d common $(2^{1}/2" \times 0.131")$ 2 - 3" × 0.131" nails 2 - 3" 14 gage staples	toenail each end
		2-16d common (3 ½"x0.162") 3-3"x0.131" nails 3-3" 14 gage staples	end nail
	Flat blocking to truss and web filler	16d common (3 ½"x0.162") @6" o.c. 3-3"x0.131" nails @ 6" o.c. 3-3" 14 gage staples @ 6" o.c.	Face nail
2.	Ceiling joists to top plate	3-8d common 3-10d box 3-3"x0.131" nails 3-3" 14 gage staples, 7/16" crown	Toenail each joist
3.	Ceiling joist not attached to parallel rafter, laps over partitions (no thrust) (Table and Section2308.7.3.1)	3-16d common 4-10d box 4-3"x0.131" nails 4-3" 14 gage staples, 7/16" crown	Face nail
4.	Ceiling joists attached to parallel rafter (heel joint) (Table and Section2308.7.3.1)	Table 2308.7.3.1	Face nail
5.	Collar tie to rafter	3-10d common 4-10d box 4-3"x0.131" nails 4-3" 14 gage staples, 7/16" crown	Face nail
6.	Rafter or roof truss to top plate (Table and section 2308.7.5)	3-10 common 3-16d box 4-10d box 4-3"x0.131" nails 4-3" 14 gage staples, 7/16" crown	Toenail (c)
7.	Roof rafters to ridge valley	2-16d common	End nail

	or hip rafters; or roof rafter to 2" ridge beam	3-10d box 3-3"x0.131" nails 3-3" 14 gage staples, 7/16" crown	
		3-10d common 3-16d box 4-10d box 4-3"x0.131" nails 4-3" 14 gage staples, 7/16" crown	Toenail
		WALL	
8.	Stud to Stud (not at braced wall panels)	16d common	24" o.c. face nail
		10d box 3"x0.131" nails 3" 14 gage staples, 7/16" crown	16" o.c. face nail
9.	Stud to stud and abutting studs at intersecting wall	16d common	16" o.c. face nail
	corners (at braced wall panels)	16d box	12" o.c. face nail
		3"x0.131" nails 3" 14 gage staples, 7/16" crown	12" o.c. face nail
10.	Built-up header	16d common 16d box	16" o.c. each edge, face na 12" o.c. each edge, face na
11.	Continuous header to stud	4-8d common 4-10d box	Toenail
12.	Top plate to top plate	16d common 10d box 3"x0.131" nails	16" o.c. face nail 12" o.c. face nail
13.	Top plate to top plate, at end joints	3" 14 gage staples, 7/16" crown 8-16d common 12-10d box 12-3"x0.131" nails 12-3" 14 gage staples, 7/16" crown	Each side of end joint, face nail (min 24" lap splice length each side of end joint)
14.	Bottom plate to joist, rim joist, band joist or blocking (not at braced wall panels)	16d box 3"x0.131" nails 3" 14 gage staples, 7/16" crown	16" o.c. face nail 12" o.c. face nail
15.	Bottom plate to joist, rim joist, band joist or blocking at braced wall panels	2-16d common 3-16d box 4-3"x0.131" nails 4-3" 14 gage staples, 7/16" crown	16" o.c. face nail
16.	Stud to top or bottom plate	4-8d common 4-10d box 4-3"x0.131" nails 4-3" 14 gage staples, 7/16" crown	Toenail
		2-16d common 3-10d box 3-3"x0.131" nails 3-3" 14 gage staples, 7/16" crown	End nail

17.	Top or bottom plate to stud	2-16d common	End nail
		3-10d box	
		3-3"x0.131" nails	
		3-3" 14 gage staples, 7/16" crown	
18.	Top plates, laps at corners	2-16d common	Face nail
	and intersections	3-10d box	
		3- 3"x0.131" nails	
		3-3" 14 gage staples, 7/16" crown	
19.	1" brace to each stud and	2-8d common	Face nail
	plate	2-10d box	
		2- 3"x0.131" nails	
		2- 3" 14 gage staples, 7/16" crown	
20.	1"x6" sheathing to each	2-8d common	Face nail
	bearing	2-10d box	
21.	1"8" and wider sheathing	3-8d common	Face nail
	to each bearing	3-10d box	
		FLOOR	
22.	Joist to sill, top plate, or	3-8d common	Toenail
	girder	3-10d box	
		3-3"x0.131" nails	
		3-3" 14 gage staples, 7/16" crown	
23.	Rim joist, band joist, or	8d common	6" o.c., toenail
	blocking to top plate, sill or	10d box	
	other framing below	3"x0.131" nails	
		3" 14 gage staples, 7/16" crown	
24.	1"x6" subfloor or less to	2-8d common	Face nail
_	each joist	2-10d box	
25.	2" subfloor to joist or girder	2-16d common	Face nail
26.	2" plank	2-16d common	Each bearing, face nail
27.	Built up girders and beams,	20d common	32" o.c. face nail at top and
	2" lumber layers		bottom staggered on
			opposite sides
		10d box	24" o.c. face nail at top and
		3"x0.131" nails	bottom staggered on
		3" 14 gage staples, 7/16" crown	opposite sides
		And	Ends and at each splice,
		$\overline{2-20}$ d common	face nail
		3-10dbox	
		3- 3"x0.131" nails	
		3- 3" 14 gage staples, 7/16" crown	
28.	Ledger strip supporting	3-16d common	Each joist or rafter, face nail
	joists or rafters	4-10d box	
		4-3"x0.131" nails	
		4-3" 14 gage staples, 7/16" crown	
29.	Joist to band joist or rim	3-16d common	End nail
	joist	4-10d box	
		4-3"x0.131" nails	
		4-3" 14 gage staples, 7/16" crown	
30.	Bridging or blocking to	2-8d common	Each end, toenail

	joist, rafter or truss	2-10d box	
		2-3"x0.131" nails	
		2-3" 14 gage staples, 7/16" crown	
1	WOOD STRUCTURAL PANS	S, SUB FLOOR, ROOF AND INTERIOR W	ALL SHEATHING TO
	FRAMING AND PA	RTICLEBOARD WALL SHEATHING TO	FRAMING (a)
31.	3/8"-1/2"	6d common or deformed (2"x0.113")	6" edge
		(subfloor and wall)	12" intermediate supports
		8d box or deformed (roof)	
		2 3/8"x0.113" nail (subfloor and wall)	
		1 3/4" 16 gage staple, 7/16" crown	4" edge
		2 3/8" x0.113" nail (roof)	8" intermediate supports
		1 <sup>3</sup> / <sub>4</sub> "16 gage staple, 7/16" crown (roof)	3" edge
		. ,	6" intermediate supports
32.	19/32" –3/4"	8d common	6" edge
		6d deformed	12" intermediate supports
		2 3/8"x0.113 nail	4" edge
		2" 16" gage staple, 7/16" crown	8" intermediate supports
33.	7/8" – 1/4"	10d common	6" edge
		8d deformed	12" intermediate supports
		HER EXTERIOR WALL SHEATHING	
34.	1/2" fiberboard sheathing <sup>(b)</sup>	1 ½" galvanized roof nail	3" edge
		1 <sup>1</sup> / <sub>4</sub> " 16 gage staple with 7/16" or 1" crown	6" intermediate supports
35.	25/32" fiberboard	1 3/4" galvanized roof nail	3" edge
	sheathing (b)	1 ½" 16 gage staple with 7/16" or 1" crown	6" intermediate supports
		S, COMBINATION SUBFLOOR UNDERL	
36.	<sup>3</sup> / <sub>4</sub> " and less	8d common	6" edge
		6d deformed	12" intermediate supports
37.	7/8"-1"	8d common	6" edge
		8d deformed	12" intermediate supports
38.	1 1/8"-1 1/4"	10d common	6" edge
		8d deformed	12" intermediate supports
		PANEL SIDING TO FRAMING	
39.	½" or less	6d corrosion-resistant siding	6" edge
		6d corrosion-resistant casing	12" intermediate supports
40.	5/8"	8d corrosion-resistant siding	6" edge
		8d corrosion-resistant casing	12" intermediate supports
		INTERSIOR PANELING	
41.	1/4"	4d casing	6" edge
		4d finish	12" intermediate supports
42.	3/8"	6d casing	6" edge
		6d finish	12" intermediate supports

ALL ANCHORS, HOLDOWN BOLTS, REBARS, TO BE IN PLACE AT FOUNDATION INSPECTION.
ALL SHEARWALL EPOXY HOLDOWN TO BE SPECIAL INSPECTED BY THE CITY.

# STRUCTURAL OBSERVATION NOTES:

THE FOLLOWING STRUCTURAL OBSERVATION SHOULD BE PROVIDED BY ENGINEER OF RECORD:

- A. HOLD DOWN WITH EPOXY, SIMPSON SET-XP ADHESIVE SYSTEM TO (E) FOUNDATIONS
- B. SHEATHING AND NAILING SCHEDULE FOR SHEAR WALL AND ROOF PLYWOOD
- C. SHEAR TRANSFER MEMBERS INCLUDING STRAPS AND FASTENERS AT SHEAR WALL AND ROOF PLYWOOD.

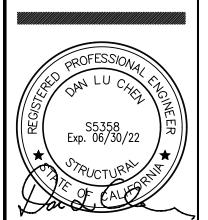
ALL BRACKETS AND FASTENERS IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE Z-MAX OR EQUAL.

For SI: 1 inch = 25.4 mm.

- a. Nails spaced at 6 inches at intermediate supports where spans are 48" or more. For nailing of wood structural panel and particleboard diaphragms and shear walls, refer to Section 2305. Nails for wall sheathing are permitted to be common, box or casing.
- b. Spacing shall be 6 inches on center on the edges and 12 inches on center at intermediate supports for nonstructural applications. Panel supports at 16 inches (20 inches if strength axis in the long direction of the panel, unless otherwise marked).
- c. Where a rafter is fastened to an adjacent parallel ceiling joist in accordance with this schedule and the ceiling joist is fastened to the top plate in accordance with this schedule, the number of toenails in the rafters shall be permitted to be reduced by one nail.

\*\* See Table 2304.10.1 for more information

STRUCTURE ENGINEER
DAN L. CHEN S.E.
T 510 579 8230
47849 Masters Ct.
Fremont, CA 94539



SINGLE FAMILY HOUS
202 ALTURA VISTA,
LOS ALTOS, CA 9503

S

PROJECT

ADDITION & REMODEL

SHEET TITLE

GENERAL NOTES

REVISION

1
2

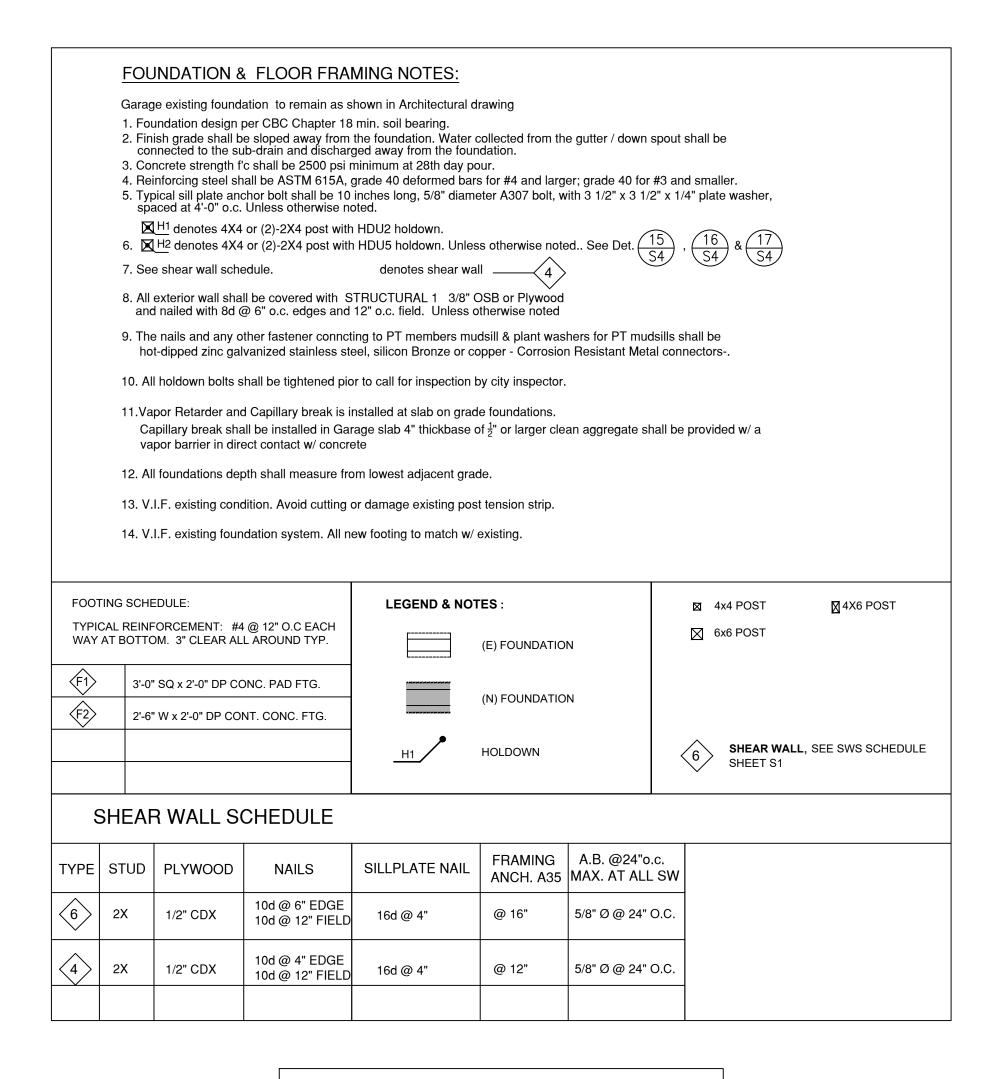
<u>3</u> <u>4</u>

 DATE
 05.05.21

 DRAWN BY
 AA

 SCALE
 AS SHOWN

S-1



CONTRACTOR TO VIF EXISTING FOUNDATION. DO NOT CUT (E) FOUNDATION IF IT FOUND TO BE P.T. SLAB. NOTIFY EOR. PRIOR CONTINUING THE CONSTRUCTION.

FOUNDATION PLAN

SCALE 1/4"= 1'-0"

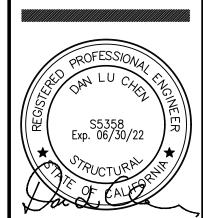
STRUCTURE ENGINEER

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Fremont, CA 94539



SINGLE FAMILY HOUSE 202 ALTURA VISTA, LOS ALTOS, CA 95032

PROJECT

ADDITION & REMODEL

SHEET TITLE

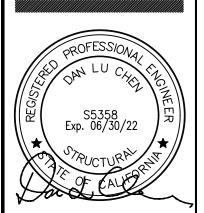
FOUNDATION PLAN + NOTES

REVISION	
$\triangle$	
2	
<u>^3</u>	
4	
DATE	05.05.21
DRAWN BY	AA
SCALE	AS SHOWN

S-2

SCALE 1/4"= 1'-0"

STRUCTURE ENGINEER DAN L. CHEN S.E. T 510 579 8230 47849 Masters Ct. Fremont, CA 94539



HOUSE

PROJECT

**ADDITION &** REMODEL

SHEET TITLE

FLOOR & ROOF FRAMING PLANS + NOTES

REVISION

DATE 05.05.21 DRAWN BY AA

AS SHOWN SCALE

S-3

- 1. All floor sheathing to be 3/4" CDX plywood or OSB T&G with 10d @ 6"O.C edge and 10" O.C. field.
- All floor joist to be TJI 230 x 11½" depth at 16" O.C. and provide double floor Joist under partition wall.
   Provide Simpson HU type of hanger for I joist to beam connection.
- 4. All floor beam shall be 2.0 Paralam PSL type by Weyerhaeuser.

FLOOR AND LOWER ROOF FRAMING

- 5. Provide minimum 4x4 #1 post support for 3-1/2 x PSL beam or 4x beam member and 4x6 #1 post for 5-1/4 x PSL beam and 3-1/2 x 7PSL post for 7x beam.
- All 3-1/2 x and 5-1/4 x beams shall have Simpson CCQ44SDS2.5 and CCQ66SDS2.5 column cap to 4x4 or 4x6 posts.
   The floor beams connect to each other with Simpson EGQ Hanger U.N.O. 3-1/2 x beam shall have EGQ3.62-SDS3 Hanger, 5-1/4 x beam shall have EGQ5.50-SDS3 Hanger.7x beam shall have EGQEGQ7.25-SDS3
- 8. T1 denoted Simpson MST 48 strap connect from 2nd floor shear panel to shear panel or transfer beam and 2nd floor level see detail 4/S5 and 5/S6.
- 9. C1 denote Simpson CMSTC16 strap 68 inches total length at top plate and blocking or collector member, see detail 18/S7 & 18/S6 for collector at floor, see detail 13/S7, 3/S7 & 19/S7 at lower roof collector.
- 10. All framing lumber for lower roof to be Douglas Fir/Larch, U.N.O.

  11. Use RR hanger and / or LS70 at rafter to ridge or hip beam connections, see detail 13/S6 and 4/S7

  12. All roof and ceiling beam shall be support by 4x or 6x post with positive connection, see detail 11/S7

  13. The lower roof sheathing to ½" CDX plywood or OSB and nailed and placed with 10d at 6" o.c edge and 12" o.c. field.
- 14. All California framing shall have plywood sheathing at upper and lower framing, see detail 14/S6

# **ROOF NOTES:**

- All new roof sheathing to be 1/2" CDX plywood or OSB and nailed and placed with 10d at 6" o.c edge and 12" o.c. field.
   All framing member shall be Douglas Fir/Larch, U.O.N.
- 3. All roof and ceiling beam shall be support by 4x post with positive connection per detail 8/S7 & 11/S7, post shall be carried all the way to foundation, Under the post between floor joists shall filled with solid blocking.
- Use "RR" hanger or LS70" at rafter or hip beam connection.
   C1 denoted Simpson MST37 or CST 16 strap 48 "length at collector and top plate splice. See detail 13/S7
   Provide Simpson MST37 or CMSTC16 strap 48 "length at and top plate splice. See detail 13/S7, 19/S7 & 12/S7
   Roof framing to be 2 x 8 #2 rafter and 2 x 6 #2ceiling joist at 24" o.c per plan.
- 8. Ridge beam per plan with minimum 4x4 king post at end
- 9. All 3½ x PSL member connect ea other w/ simpson HHGU Hanger
  10. All PSL member to be 2.0E parallam & ML to be 2.0E microllam LVL by weyerhaeuser manufacture member.

# CAL GREEN 2019 MANDATORY MEASURES

- 1. JOINTS AND OPENINGS. ANNULAR SPACES AROUND PIPES, ELECTRIC CABLES, CONDUITS OR OTHER OPENINGS IN PLATES AT EXTERIOR WALLS SHALL BE PROTECTED AGAINST THE PASSAGE OF RODENTS BY CLOSING SUCH OPENINGS WITH CEMENT MORTAR, CONCRETE MASONRY OR SIMILAR METHOD ACCEPTABLE TO THE ENFORCING AGENCY.
- 2. MOISTURE CONTENT OF BUILDING MATERIALS USED IN WALL AND FLOOR FRAMING IS CHECKED BEFORE

SECOND FLOOR & LOWER ROOF FRAMING PLAN

(N) 2 x 10 #1 FLR JST

@ 16" O.C. TYP. @ BALCONY

(N) 2 x 12 #1 FLR JST @ 16" O.C. TYP.

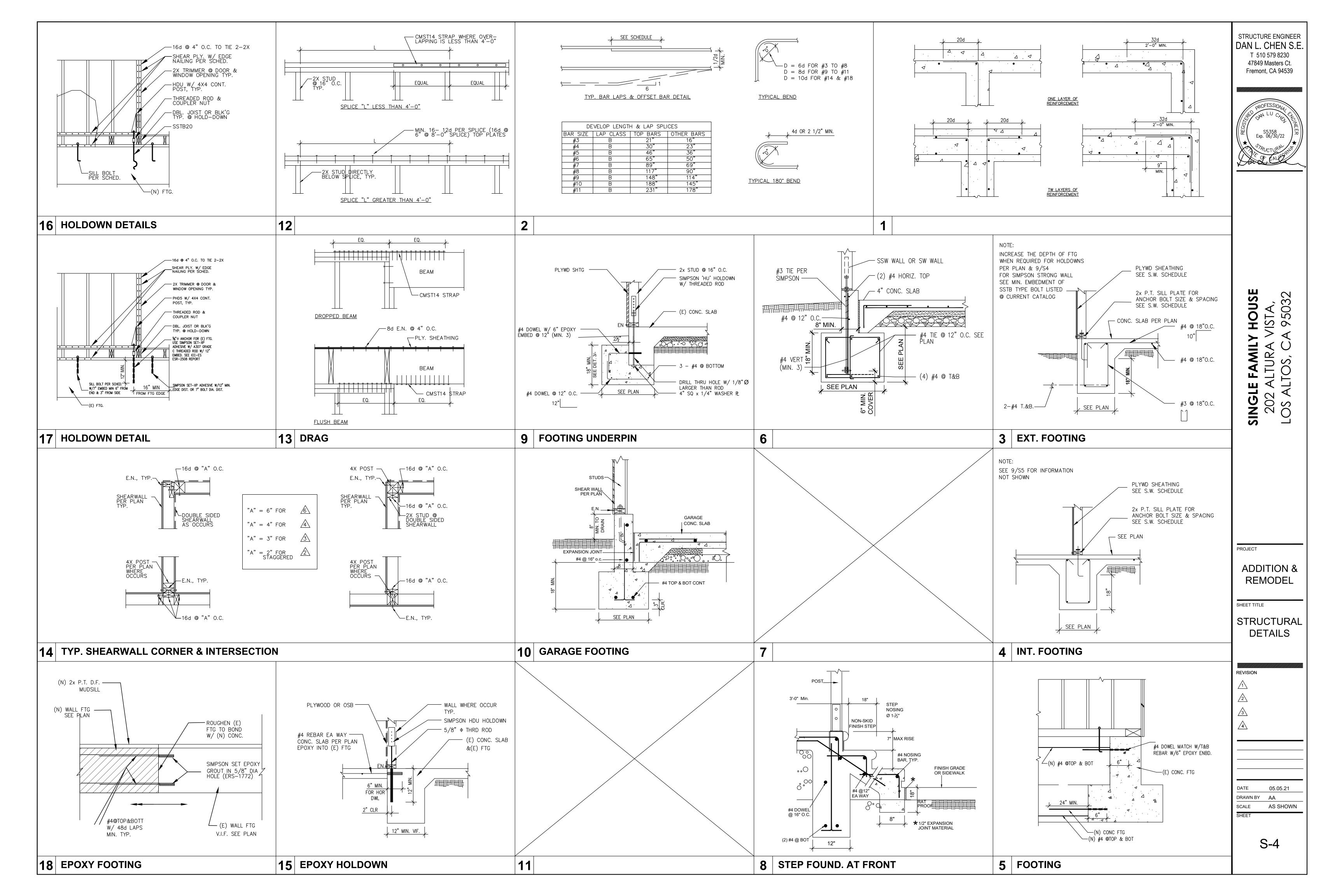
7 x 16 PSL

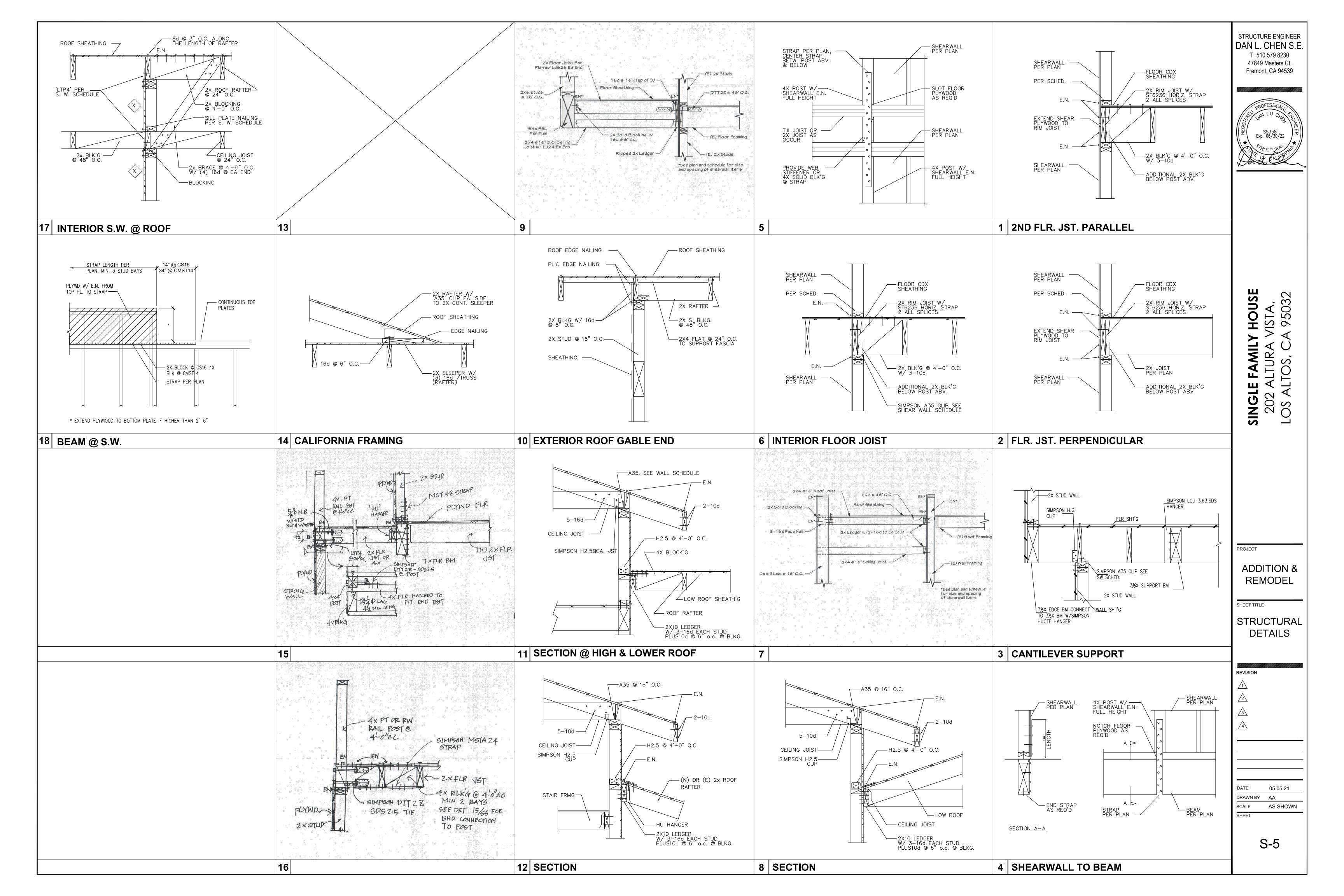
3½ x 11% PSL CONT.

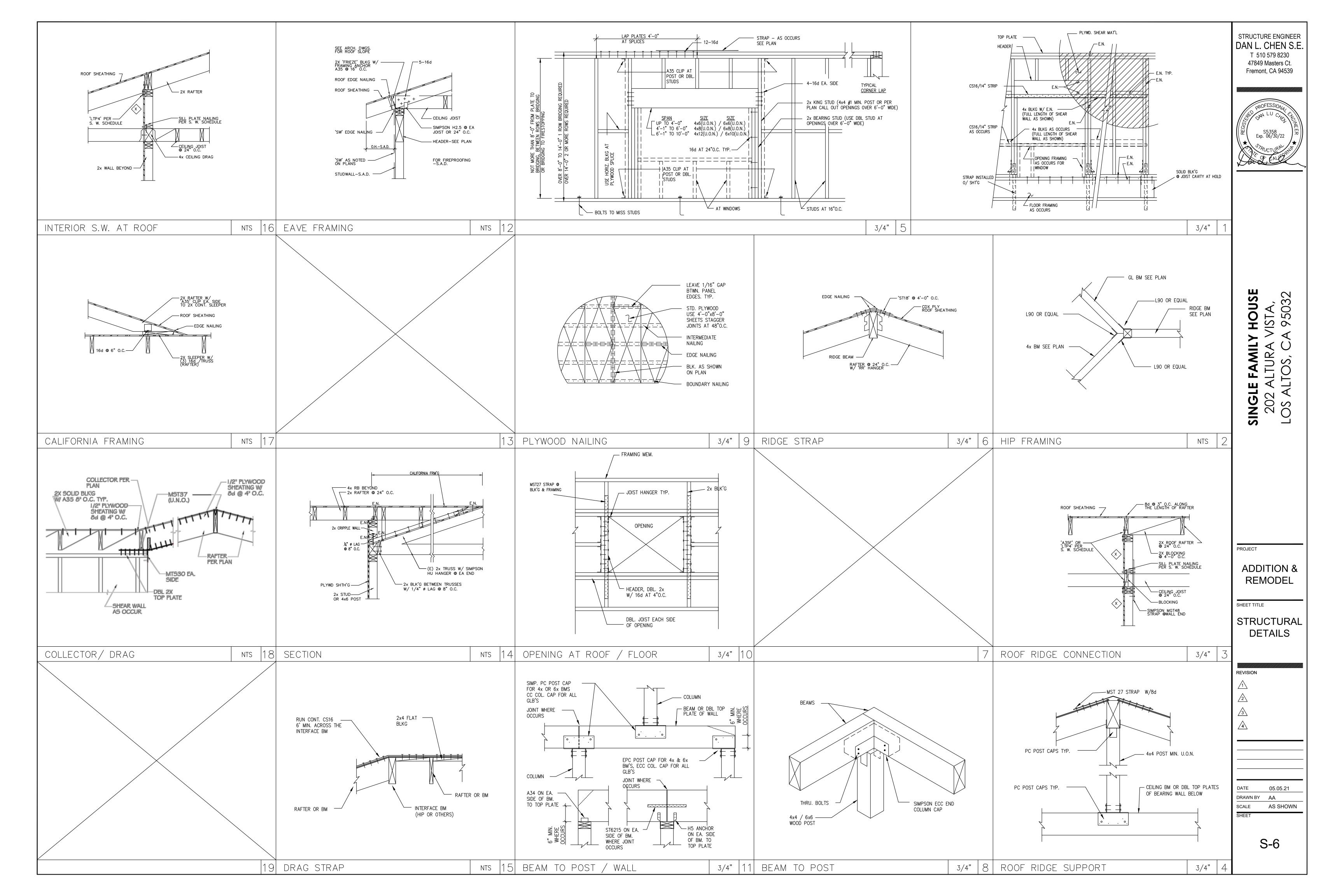
21'-0" 6

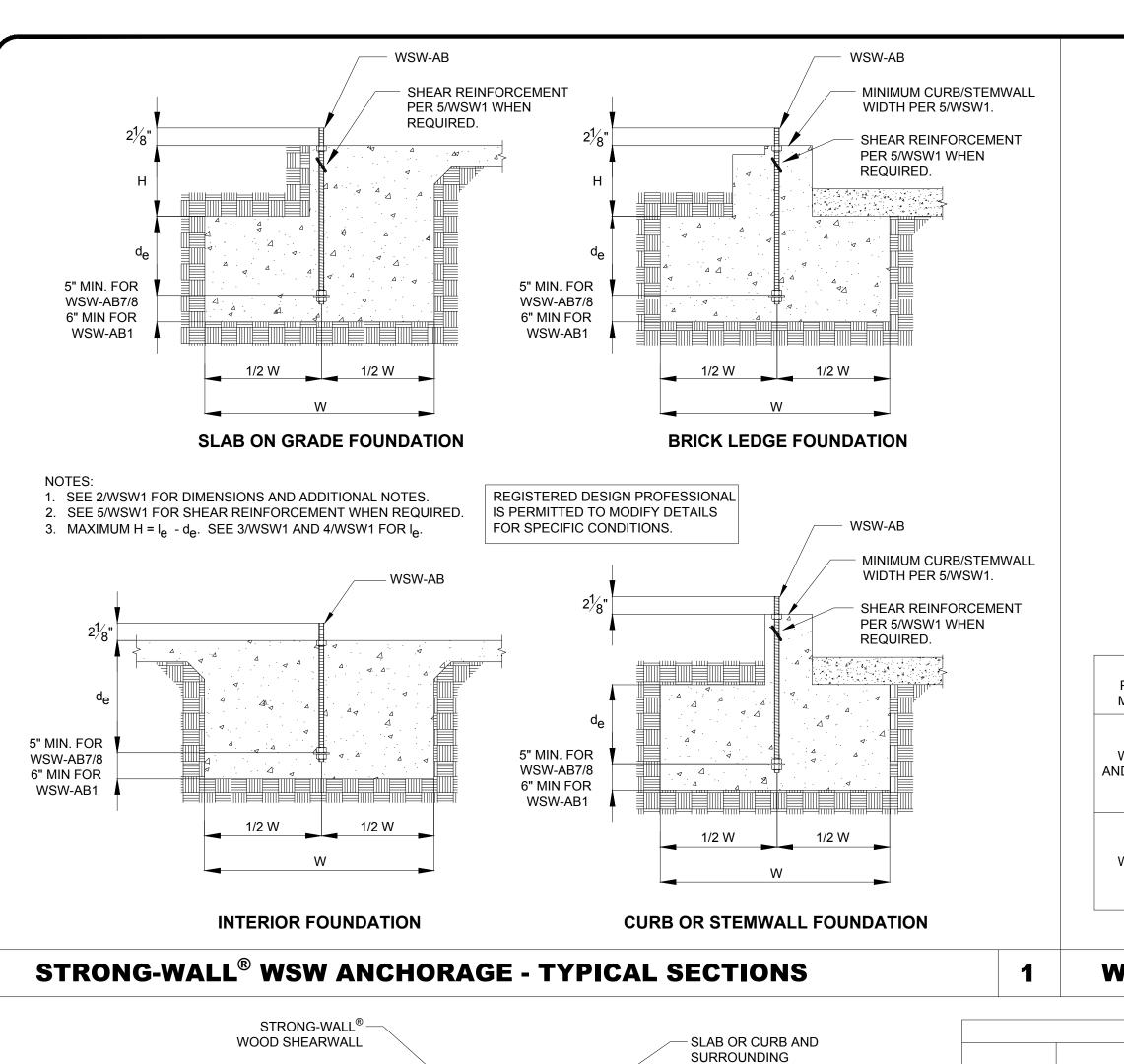
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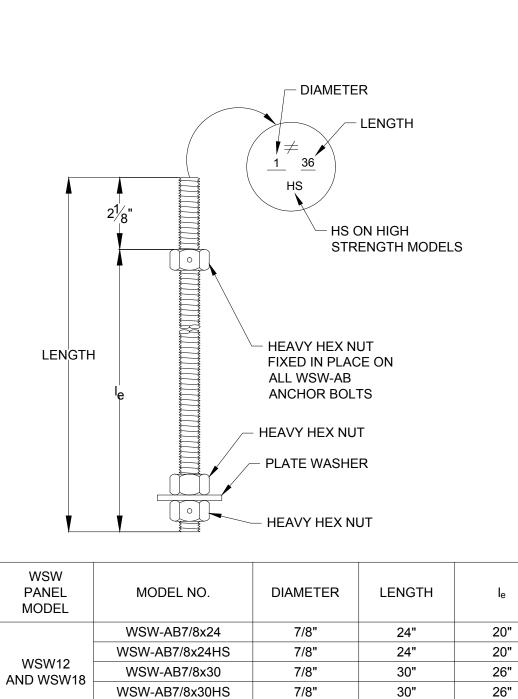
TO REMAIN











7/8"

32"

20"

20"

26"

26"

32"

24"

24"

30"

30"

36"

WSW-AB7/8x36HS

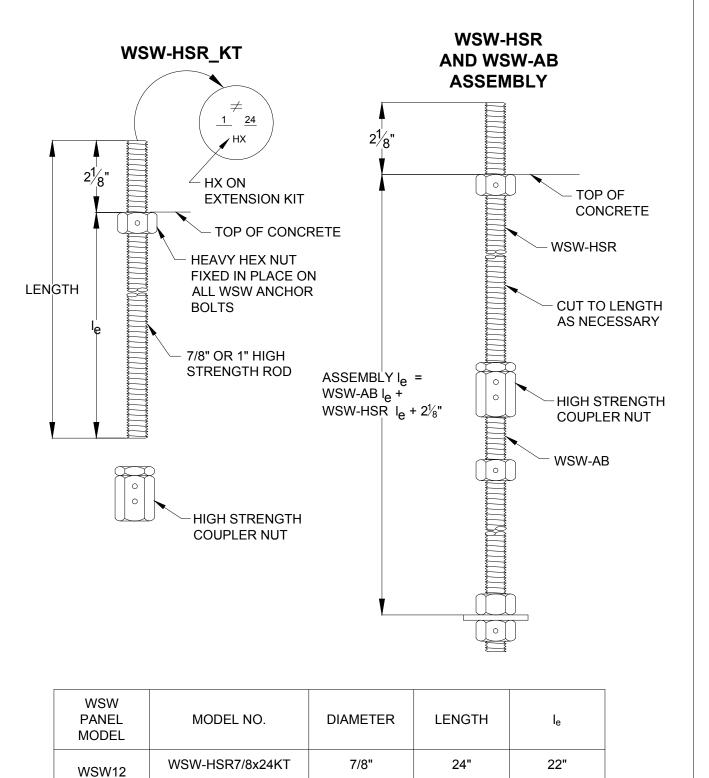
WSW-AB1x24

WSW-AB1x24HS

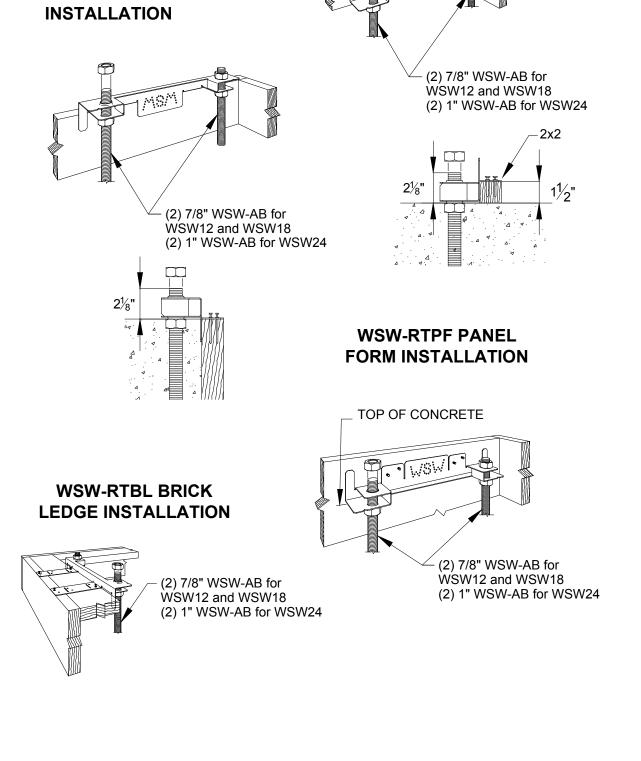
WSW-AB1x30

WSW-AB1x30HS

WSW-AB1x36HS



7/8"



WSW-RT INTERIOR

**INSTALLATION** 

**WSW ANCHOR BOLTS** 

**WSW ANCHOR BOLT EXTENSION** 

WSW-HSR7/8x36KT

WSW-HSR1x24KT

WSW-HSR1x36KT

AND WSW18

WSW24

#3 TIE, GRADE 60 REBAR (MIN.) GRADE 60 REBAR (MIN.) FIELD TIE AND SECURE DURING FIELD TIE AND SECURE DURING CONCRETE PLACEMENT.

**WSW ANCHOR BOLT TEMPLATES** 

ANCHOR BOLT

HAIRPIN REINFORCEMENT ACHIEVES

MAXIMUM ALLOWABLE SHEAR LOAD OF

THE WSW

**WSW-RT EXTERIOR** 

. #3 HAIRPIN

ANCHOR BOLT

CONCRETE PLACEMENT. OVERLAP

#3 HAIRPIN (#3 TIE SIMILAR).

SEE TABLE FOR REQUIRED

VARIES WITH BOLT SPACING.

QUANTITY.

34"

22"

34"

 $L_h$  MIN

36"

24"

HAIRPIN SHEAR REINFORCEMENT

**ANCHOR BOLT** #3 HAIRPIN (#3 TIE SIMILAR). SEE TABLE FOR REQUIRED  $1\frac{1}{2}$ " CLR

**SECTION A-A** 

TIE SHEAR REINFORCEMENT

REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

HAIRPIN INSTALLATION (GARAGE CURB SHOWN. OTHER FOOTING TYPES SIMILAR.)

STRONG-WALL® WOOD SHEARWALL SHEAR ANCHORAGE SEISMIC 3 WIND 4 MINIMUM ASD ALLOWABLE SHEAR LOAD, V (lb.) CURB/ SHEAR CURB/ STEMWALL STEMWALL REINFORCEMENT REINFORCEMENT WIDTH (in.) WIDTH (in.) UNCRACKED CRACKED (1) #3 HAIRPIN SEE NOTE 6

# WSW24 19

MODEL

WSW12

WSW18

 $10\frac{1}{4}$ 

1. SHEAR ANCHORAGE DESIGNS CONFORM TO ACI 318-11 AND ACI 318-14 AND ASSUME MINIMUM 2,500 PSI CONCRETE.

(1) #3 HAIRPIN

(2) #3 HAIRPINS

SHEAR REINFORCEMENT IS NOT REQUIRED FOR INTERIOR FOUNDATION APPLICATIONS (PANEL INSTALLED AWAY FROM EDGE OF

(1) #3 HAIRPIN

(1) #3 HAIRPIN

- CONCRETE), OR BRACED WALL PANEL APPLICATIONS.
- 3. SEISMIC INDICATES SEISMIC DESIGN CATEGORY C THROUGH F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS.
- 4. WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C.
- 5. WHERE NOTED, MINIMUM CURB/STEMWALL WIDTH IS 6 INCHES WHEN STANDARD STRENGTH ANCHOR BOLT IS USED.
- 6. USE (1) #3 TIE FOR WSW12 WHEN PANEL DESIGN SHEAR FORCE EXCEEDS TABULATED ANCHORAGE ALLOWABLE SHEAR LOAD. 7. #4 GRADE 40 SHEAR REINFORCEMENT MAY BE SUBSTITUTED FOR WSW SHEAR ANCHORAGE SOLUTIONS.

FOUNDATION NOT SHOWN FOR CLARITY 1/2 W 1/2 W – WSW-AB 1/2 W 1/2 W

# **FOUNDATION PLAN VIEW**

		WSW	ANCHORAGE SOL	UTIONS FOR 2	2500 PSI CONC	RETE			
		ANCHOR STRENGTH	WSW-AE	37/8 ANCHOR	BOLT	WSW-AB1 ANCHOR BOLT			
	CONCRETE CONDITION		ASD ALLOWABLE TENSION (lb.)	W (in.)	d <sub>e</sub> (in.)	ASD ALLOWABLE TENSION (lb.)	W (in.)	d <sub>e</sub> (in.)	
	CRACKED	STANDARD	11,900	27	9	16,100	33	11	
			13,100	29	10	17,100	35	12	
		HIGH STRENGTH	24,900	43	15	33,000	51	17	
CEICMIC			27,100	46	16	35,300	54	18	
SEISMIC		STANDARD	12,500	24	8	15,700	28	10	
	UNCRACKED		13,100	25	9	17,100	30	10	
		HIGH STRENGTH	25,300	38	13	32,300	44	15	
			27,100	40	14	35,300	47	16	
	CRACKED	STANDARD	5,100	14	6	6,200	16	6	
			8,700	20	7	11,400	24	8	
			13,100	27	9	17,100	32	11	
		HIGH STRENGTH	15,900	30	10	21,100	36	12	
			18,400	33	11	27,300	42	14	
			23,100	38	13	31,800	46	16	
WIND			27,100	42	14	35,300	50	17	
	UNCRACKED	STANDARD	5,000	12	6	6,400	14	6	
			9,300	18	6	12,500	22	8	
			13,100	23	8	17,100	28	10	
		HIGH STRENGTH	15,200	25	9	21,900	32	11	
			19,900	30	10	26,400	36	12	
			24,000	34	12	31,500	40	14	
			27,100	37	13	35,300	43	15	

- 1. ANCHORAGE DESIGNS CONFORM TO ACI 318-11 APPENDIX D AND ACI 318-14 WITH NO SUPPLEMENTARY REINFORCEMENT FOR CRACKED OR UNCRACKED CONCRETE AS NOTED.
- 2. ANCHOR STRENGTH INDICATES REQUIRED GRADE OF WSW-AB ANCHOR BOLT. STANDARD (ASTM F1554 GRADE 36) OR HIGH STRENGTH
- (HS) (ASTM A449). SEISMIC INDICATES SEISMIC DESIGN CATEGORY C - F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS. SEISMIC ANCHORAGE DESIGNS CONFORM TO ACI 318-11 SECTION D.3.3.4.3 AND ACI 318-14 SECTION 17.2.3.4.3.
- 4. WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C.
- 5. FOUNDATION DIMENSIONS ARE FOR ANCHORAGE ONLY. FOUNDATION DESIGN (SIZE AND REINFORCEMENT) BY OTHERS. THE REGISTERED DESIGN PROFESSIONAL MAY SPECIFY ALTERNATE EMBEDMENT, FOOTING SIZE OR ANCHOR BOLT.
- 6. REFER TO 1/WSW1 FOR de.

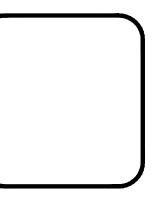
			WSW-AB7/8 ANCHOR BOLT			WSW-AB1 ANCHOR BOLT		
DESIGN CONCRETE CONDITION	ANCHOR STRENGTH	ASD ALLOWABLE TENSION (lb.)	W (in.)	d <sub>e</sub> (in.)	ASD ALLOWABLE TENSION (lb.)	W (in.)	d <sub>e</sub> (in.)	
	CRACKED	STANDARD	12,300	26	9	16,000	31	11
			13,100	28	10	17,100	33	11
	CRACKED	HIGH STRENGTH	25,200	41	14	32,700	48	16
SEISMIC			27,100	43	15	35,300	51	17
SEISMIC		STANDARD	12,000	22	8	16,300	27	9
	UNCRACKED	STANDARD	13,100	24	8	17,100	28	10
	UNCRACKED	HIGH	25,300	36	12	32,700	42	14
		STRENGTH	27,100	38	13	35,300	44	15
		STANDARD	5,000	13	6	5,600	14	6
			8,800	19	7	10,200	21	7
			13,100	25	9	17,100	30	10
	CRACKED	HIGH STRENGTH	15,700	28	10	20,100	33	11
			19,200	32	11	25,300	38	13
WIND			23,200	36	12	32,300	44	15
			27,100	40	14	35,300	47	16
	UNCRACKED	STANDARD	5,500	12	6	6,200	13	6
			8,500	16	6	12,800	21	7
			13,100	22	8	17,100	26	9
		HIGH STRENGTH	16,600	25	9	21,800	30	10
			19,700	28	10	25,200	33	11
			24,000	32	11	31,700	38	13
			27,100	35	12	35,300	41	14

		wsw	ANCHORAGE SO	LUTIONS FOR	4500 PSI CON	CRETE			
			WSW-AB7/8 ANCHOR BOLT			WSW-AB1 ANCHOR BOLT			
DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	ASD ALLOWABLE TENSION (lb.)	W (in.)	d <sub>e</sub> (in.)	ASD ALLOWABLE TENSION (lb.)	W (in.)	d <sub>e</sub> (in.)	
SEISMIC -	ODAOKED	STANDARD	12,600	23	8	16,000	27	9	
			13,100	24	8	17,100	29	10	
	CRACKED	HIGH STRENGTH	24,800	36	12	32,100	42	14	
			27,100	38	13	35,300	45	15	
		STANDARD	12,700	20	7	15,700	23	8	
	LINODACKED		13,100	21	7	17,100	25	9	
	UNCRACKED	HIGH STRENGTH	24,600	31	11	32,500	37	13	
			27,100	34	12	35,300	39	13	
		STANDARD	5,400	12	6	6,800	14	6	
			8,300	16	6	11,600	20	7	
			13,100	22	8	17,100	26	9	
	CRACKED	HIGH STRENGTH	15,300	24	8	21,400	30	10	
			19,300	28	10	25,800	34	12	
			23,600	32	11	31,000	38	13	
			27,100	36	12	35,300	42	14	
WIND	UNCRACKED	STANDARD	6,800	12	6	6,800	12	6	
			9,400	15	6	12,400	18	6	
			13,100	19	7	17,100	23	8	
		HIGH STRENGTH	16,800	22	8	21,600	26	9	
			20,300	25	9	26,700	30	10	
			24,100	28	10	32,200	34	12	
			27,100	31	11	35,300	36	12	

STRONG-WALL<sup>®</sup> WOOD SHEARWALL TENSION ANCHORAGE SCHEDULE 2,500, 3,000 AND 4,500 PSI

STRONG-WALL® WSW SHEAR ANCHORAGE SCHEDULE AND DETAILS

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COMPANY,



# RAG| ERE|

07-01-2016 N.T.S. CHECKED WSW1

SHEETS

